VE SEDAN AND SPORTWAGON

VE Sedan and Sportwagon
Owner's Handbook



GM Holden Ltd, ABN 84 006 893 232 (hereinafter Holden)

Change of name, address or ownership

In the event of a Safety Recall, or for various reasons, Holden may need to contact you as the owner of this vehicle.

If you have recently changed your address, or name, or purchased this vehicle second-hand, please help us to help you by taking a few minutes to fill in and mail the forms at the beginning of the Service/warranty booklet.

For information about GM Holden's privacy policy or to update owner details online, please visit Holden's website at www.holden.com.au

Note Please refer to the inside front cover of the Service/ warranty booklet for the Vehicle Identification Certificate.

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We thank you for choosing Holden and want to assure you of our continuing interest in your driving pleasure and satisfaction.

This handbook applies to the current VE series model. Therefore, due to different models and options, you may find reference in this Handbook to some equipment not fitted to your own vehicle.

Please note that all information, illustrations and specifications in this Handbook are based on the latest production information available at the time of printing. Holden reserves the right to make changes at any time without notice and without incurring any obligation.

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*The asterisk signifies equipment options not in all vehicles, model variants, engine options, optional equipment and Genuine Holden Accessories (and Parts).

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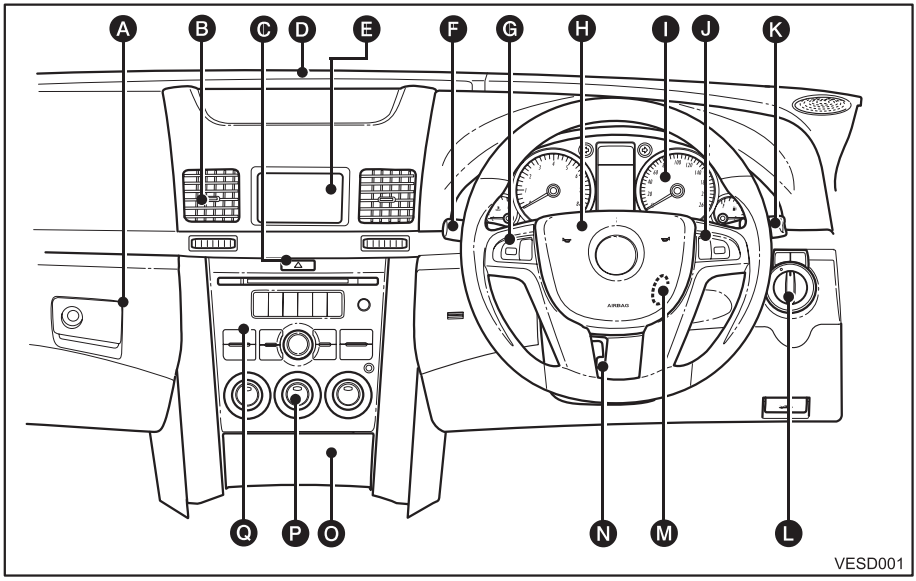
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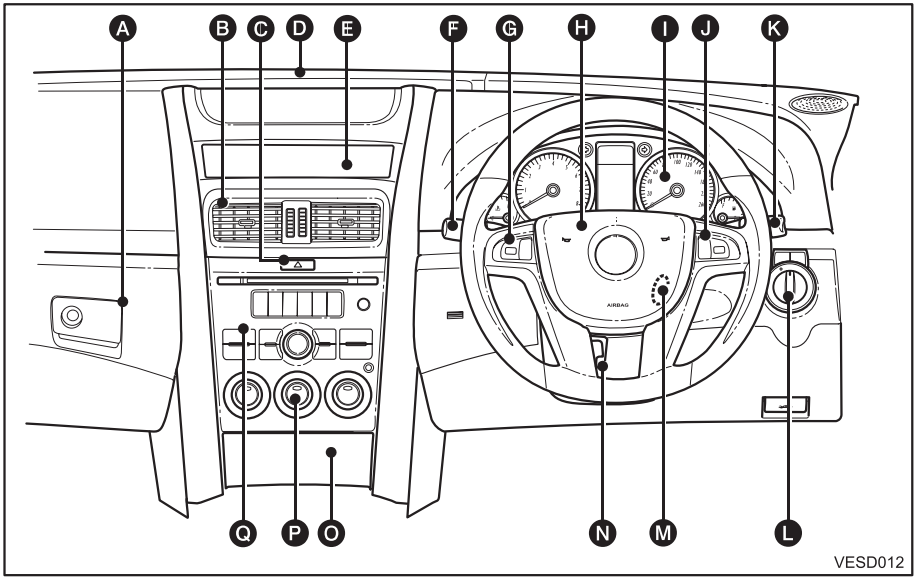
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SV6/SS



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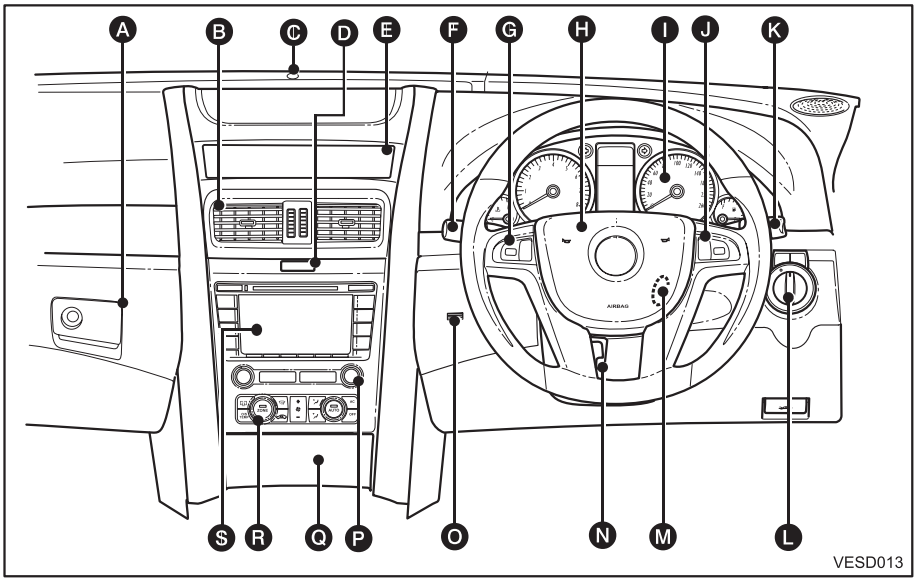
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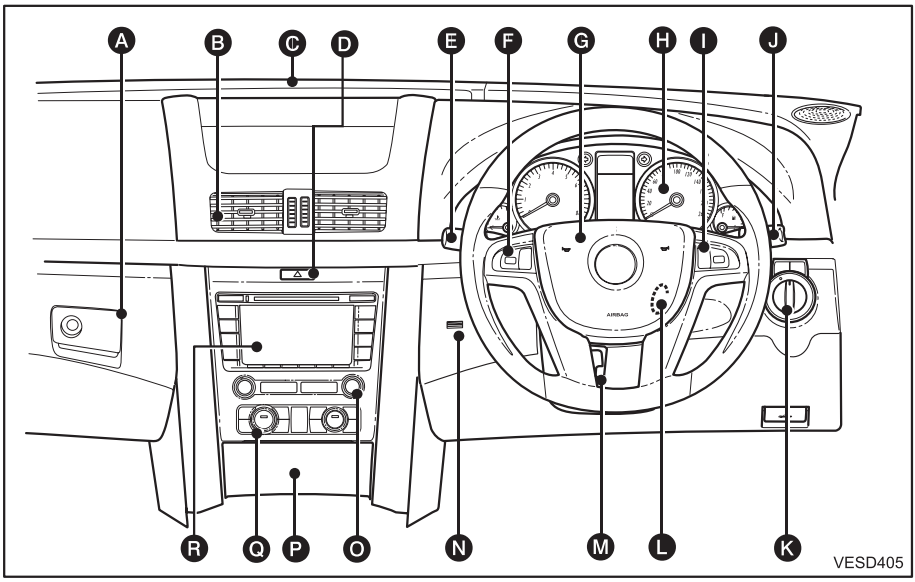
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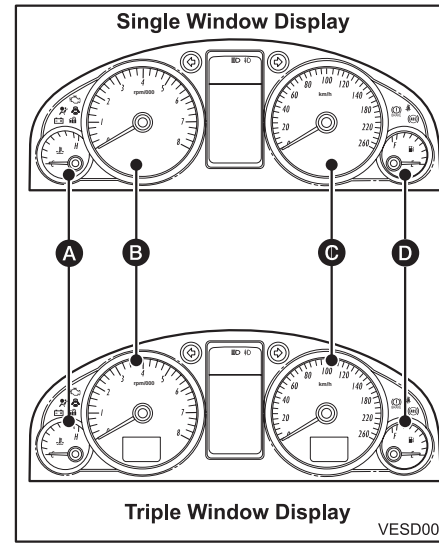
DASHBOARD LAYOUT cont.

BERLINA/CALAIS/CALAIS-V



INSTRUMENTATION

GAUGES



Ⓐ Temperature gauge

The temperature gauge indicates the engine coolant temperature when the ignition is on. Stop-start driving in heavy traffic, driving at high speed in warm weather, hill climbing or towing may cause the needle to move toward the **H**. This is normal and no cause for concern. However, if the needle moves all the way to **H** and remains there for more than 30 seconds, stop the vehicle as soon as it is safe to do so. Refer to *Engine overheating* in chapter 6.

H = hot, **C** = cold.

Ⓑ Tachometer

The tachometer shows engine speed in thousands of revolutions per minute (RPM).

Ⓒ Speedometer

The speedometer shows vehicle speed in kilometres per hour (km/h).

Ⓓ Fuel gauge

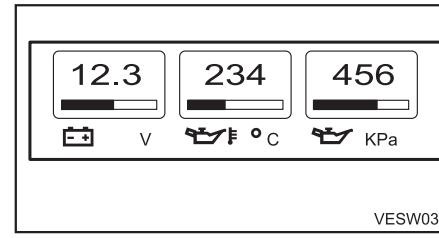
The fuel gauge shows the level of fuel in the fuel tank when the ignition is on/off:

E = empty, **F** = full.

Note Additions of fuel less than 15 litres can take up to 10 minutes to register on the fuel gauge. Larger amounts show almost immediately. This prevents fuel movement from registering on the gauge when cornering.

Sport gauges*

The gauges are located in the centre of the dashboard above the air vents. The gauges show the battery voltage, engine oil temperature and engine oil pressure.



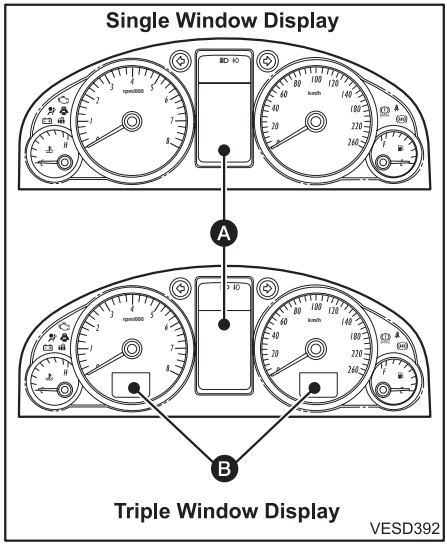
INSTRUMENTATION cont.

INFORMATION DISPLAYS

The instrument panel information displays provide visual information to the driver for a number of vehicle functions such as trip computer, audio, warnings and reminders. Depending on luxury level, the vehicle is fitted with a single-window display or a triple-window display.

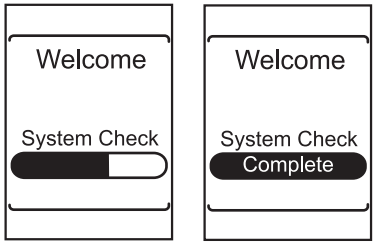
Ⓐ Centre display.

Ⓑ Trip computer display*.



Display – Ignition on

When the ignition is switched on, a vehicle system check is performed and the status is shown on the display. If there are no warnings or service reminders, the display shows a series of welcome screens.



If the system check detects a problem, it displays the appropriate warning immediately. If a warning is displayed, press the **TRIP** button to acknowledge it (once for each warning). It then reverts to the original trip computer display.

Note

- Pressing the **TRIP** button any time during the system check causes the display to jump ahead to the last trip computer screen displayed before the ignition was last switched off. The system check continues to run in the background.
- To display the odometer screen, if not already displayed, press the **TRIP** button until the screen appears.
- The transmission selector position indication is only displayed if the vehicle is fitted with automatic transmission*. Refer to *Automatic transmission* in chapter 4.

Display – Ignition off

When the ignition is switched off, the odometer appears on the display for approximately 30 seconds unless a service reminder is active. Active service reminders are displayed for 10 seconds before the odometer appears. The odometer will re-appear when the driver's door is opened.

WARNING/REMINDER INDICATIONS

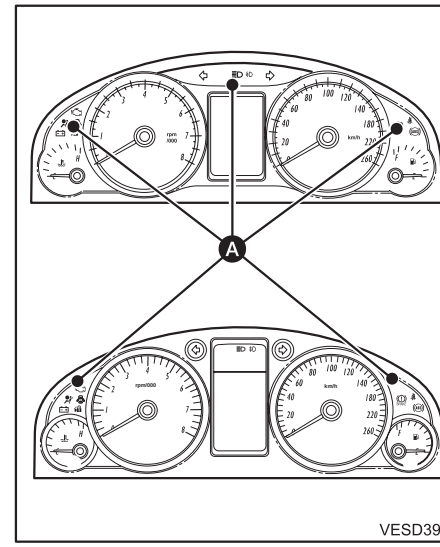
WARNING LAMPS AND REMINDERS

The following warning lamps and reminder indications may appear on the instrument panel (depending on the luxury level of the vehicle).

They appear as illuminated icons, animated symbols or a combination of both.

Most warning/reminder indications are accompanied by a chime.

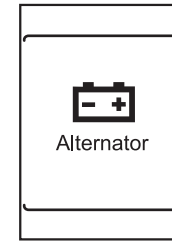
Ⓐ Warning lamp locations.



Alternator warning lamp

The alternator warning lamp illuminates for a short time when the ignition is switched on to check that the lamp is working.

If the warning lamp and the **Alternator** animation illuminate when driving, it indicates that the alternator is not charging properly. Contact your Holden Dealer.

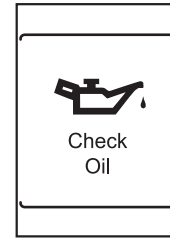


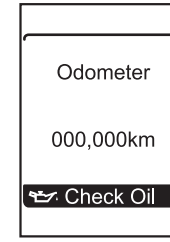
The **Alternator** animation is displayed until the **TRIP** button or the ENTER switch are pressed.

The warning lamp remains illuminated until the problem has been rectified.

Low oil pressure/level

If the **Check Oil** animation illuminates when driving, it indicates that the oil pressure or the oil level is low.





WARNING

Engine damage may result if you continue driving.

Stop when safe, switch off the engine and check the engine oil level. Refer to *Engine oil level* in chapter 7.

Do not run the engine when this warning is illuminated. If the oil level is normal, have the system checked at the nearest Holden Dealer.

The **Check Oil** animation is displayed until the **TRIP** button or the ENTER switch are pressed. The animated symbol then reverts to the original trip computer display.

Check Oil appears at the bottom of the display and remains illuminated until the problem has been rectified.

WARNING/REMINDER INDICATIONS cont.

ABS fault



The Anti-lock Brake System (ABS) warning lamp (ABS) illuminates for a short time when the ignition is switched on to verify that no monitored ABS defects are present and to check that the lamp is working.

If the (ABS) warning lamp and the **ABS Fault** animation does not extinguish or illuminates when driving, it indicates a malfunction with the ABS. Contact your Holden Dealer as soon as possible.

Note The vehicle's brake system will still operate conventionally with the anti-lock operation disabled. Refer to *Anti-lock brake system* chapter 4.

The **ABS Fault** animation is displayed until the **TRIP** button or the ENTER switch are pressed.

The (ABS) warning lamp remains illuminated until the problem has been rectified.

Brake fail and park brake warning



The brake fail/park brake warning lamp (!) illuminates for a short time when the ignition is switched on to verify that no monitored brake defects are present and to check that the lamp is working.





If the (!) warning lamp and the Brake animation does not extinguish or illuminates when driving and the park brake is released, it indicates a fault with the brakes. Carefully stop the vehicle on the side of the road immediately. Do not proceed until satisfied that braking is possible or that the cause of the problem has been rectified.

Note The **Brake** animation also indicates low brake fluid. Check the brake fluid level. Refer to *Under bonnet checks* in chapter 7.

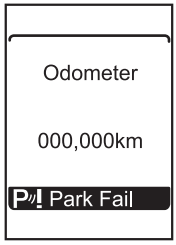
The **Brake** animation is displayed until the **TRIP** button or the ENTER switch are pressed.

The (!) warning lamp remains illuminated until the problem has been rectified.

If the **Park brake** animation (see above) illuminates and a chime sounds when driving, it indicates that the park brake is still applied. Release the park brake.

Park aid assist fault*





If the **Parking Aid Assist Fault** animation illuminates when driving, it indicates a fault in the Park Assist system. Contact your Holden Dealer.

The **Parking Aid Assist Fault** animation is displayed until the **TRIP** button or the ENTER switch are pressed. It then reverts to the original trip computer display.

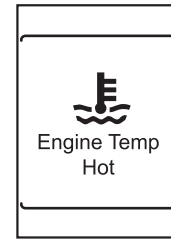
P Park Fail appears at the bottom of the display and remains illuminated until the problem has been rectified.

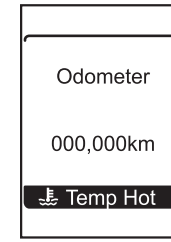
Note If the **Parking Aid Assist Fault** animation illuminates when driving, it indicates a fault in the Park Assist system. The Park Assist may not work properly during malfunction and you should manoeuvre the vehicle with special care. Check the sensors and clean them if necessary. If the malfunction persists, have the system checked by your Holden Dealer.

For further information, refer to *Park Assist* in chapter 4.

WARNING/REMINDER INDICATIONS cont.

Engine coolant temperature





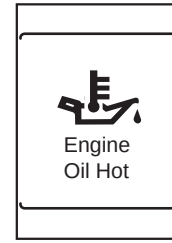
If the **Engine Temp Hot** animation illuminates when driving, it indicates that the engine coolant temperature is excessively hot. Stop the vehicle as soon as it is safe to do so.

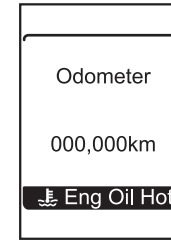
The **Engine Temp Hot** animation is displayed until the **TRIP** button or the ENTER switch are pressed. It then reverts to the original trip computer display.

Temp Hot appears at the bottom of the display and remains illuminated until the problem has been rectified.

Refer to *Engine overheating* in chapter 6.

Engine oil temperature





If the **Engine Oil Hot** animation illuminates when driving, it indicates that the engine oil has reached its maximum operating temperature.

Perform the following:

- Reduce engine RPM and vehicle load.
- If the warning remains illuminated stop the vehicle as soon as it is safe to do so and allow it to cool until the warning disappears.

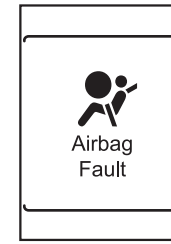
The **Engine Oil Hot** animation is displayed until the **TRIP** button or the ENTER switch are pressed. It then reverts to the original trip computer display.

Eng Oil Hot appears at the bottom of the display and remains illuminated until the problem has been rectified.

Note

- If the **Engine Oil Hot** animation illuminates when engine RPM and vehicle load are low contact your Holden Dealer as soon as possible.
- Continued operation with **Engine Oil Hot** illuminated may cause damage to your vehicle's engine, which is not covered under your New Vehicle Warranty.

Airbag and seatbelt pretensioners



The **SRS** (Supplemental Restraint System) warning lamp illuminates for a short time when the ignition is switched on to check that the lamp is working.

If the **SRS** warning lamp and the **Airbag Fault** animation illuminate when driving, it indicates that the airbag system or seatbelt pretensioner system may not function correctly in an accident. Contact your Holden Dealer immediately.

Note The **SRS** warning lamp illuminates after an accident if the airbag(s) and/or pretensioners have activated.

The **Airbag Fault** animation is displayed until the **TRIP** button or the ENTER switch are pressed. It then reverts to the original trip computer display.

The **SRS** warning lamp remains illuminated until the problem has been rectified.

Refer to *Supplemental Restraint System* in chapter 3.

WARNING/REMINDER INDICATIONS cont.

Stability control assistance





If the **Stability Ctrl Assistance** animation illuminates when driving, it indicates that the Electronic Stability Program (ESP®) is actively helping the vehicle with road grip and stability.

ESP® CTRL appears at the bottom of the display and remains illuminated as long as the Electronic Stability Program (ESP®) is actively helping the vehicle with road grip and stability.

Refer to *Electronic stability program* in chapter 4.

Stability control off





If the **Stability Ctrl Off** animation illuminates when driving and you have not switched the ESP® off by pressing the switch, it indicates that the ESP® system is no longer functioning. Contact your Holden Dealer.

The **Stability Ctrl Off** animation is displayed until the **TRIP** button or the ENTER switch are pressed. It then reverts to the original trip computer display.

ESP® OFF appears at the bottom of the display and remains illuminated until the problem has been rectified.

Note If you press the button to switch the ESP® off or on, the **Stability Ctrl Off** or **Stability Ctrl On** animation also illuminates for 2 seconds.

Refer to *Electronic stability program* in chapter 4.

Stability control fault





If the **Stability Ctrl Fault** animation illuminates when driving and you have not switched the ESP® off by pressing the switch, it indicates that the ESP® system has a fault. Contact your Holden Dealer.

The **Stability Ctrl Fault** animation is displayed until the **TRIP** button or the ENTER switch are pressed. It then reverts to the original trip computer display.

ESP® OFF appears at the bottom of the display and remains illuminated until the problem has been rectified.

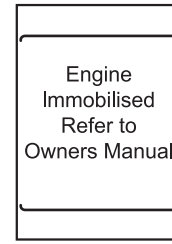
Note If you press the button to switch the ESP® off or on, the **Stability Ctrl Fault** animation also illuminates for 2 seconds.

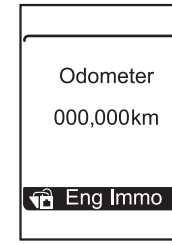
Refer to *Electronic stability program* in chapter 4.

ESP® is a registered trademark of Daimler Chrysler AG.

WARNING/REMINDER INDICATIONS cont.

Engine immobilised refer to owners manual



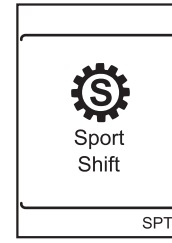


If the **Engine Immobilised Refer to Owners Manual** animation illuminates, refer to *Security* in chapter 2.

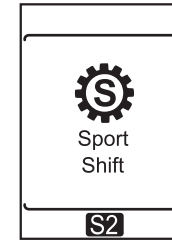
The **Engine Immobilised Refer to Owners Manual** animation is displayed until the **TRIP** button or the ENTER switch are pressed. The animated symbol then reverts to the original trip computer display.

Eng Immo appears at the bottom of the display and remains illuminated until the problem has been rectified.

Sport shift*



4 speed

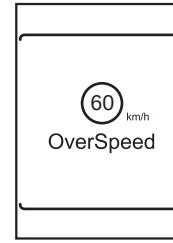


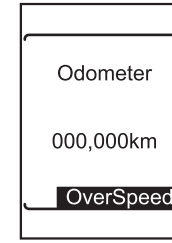
6 speed

The **Sport Shift** animation illuminates when the automatic transmission* is operating in sport shift mode.

Refer to *Automatic transmission* in chapter 4.

Overspeed





The **OverSpeed** animation illuminates and a chime sounds to warn the driver when the vehicle‘s speed exceeds a preselected value.

The **OverSpeed** animation illuminates until:

- it returns automatically after 10 seconds, or
- the vehicle’s speed drops below the preselected value, or
- the ENTER switch is pressed.

It then returns to the original trip computer display while **OverSpeed** at the bottom of the display illuminates as long as the vehicle’s speed exceeds the preset value.

Refer to *Trip Computer* further on in this chapter.

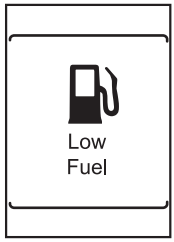
WARNING/REMINDER INDICATIONS cont.

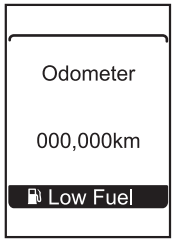
Low fuel

If the **Low Fuel** animation illuminates when driving, it indicates that the fuel level is low.

The **Low Fuel** animation is displayed until the **TRIP** button or the ENTER switch are pressed.

Low Fuel appears at the bottom of the display and remains illuminated until the fuel tank is filled above the low fuel level.





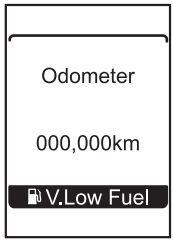
Very low fuel

If the **Very Low Fuel** animation illuminates when driving, it indicates that the fuel level is very low.

The **Very Low Fuel** animation is displayed until the **TRIP** button or the ENTER switch are pressed.

V.Low Fuel appears at the bottom of the display and remains illuminated until the fuel tank is filled above the low fuel level.





Rest reminder

This feature reminds the driver that they may have been driving for too long without a break.

When the ignition is switched on, a timer starts counting. After two hours of continuous driving, the rest reminder icon flashes to alert the driver.

The **Rest reminder** animation is displayed until the **TRIP** button or the ENTER switch are pressed. The animated symbol then reverts to the original trip computer display.

The rest reminder reappears after a further 20 minutes accompanied by a chime, unless the ignition has been switched off.

For information on how to switch the rest reminder on and off, refer to *Customisation menu* further on in this chapter.



Shift denied

The transmission will shift to a selected gear only if the engine speed is within a suitable range. If the engine speed is not suitable, the displayed gear will not change and the message **Shift Denied** will be displayed, indicating that the transmission has not shifted gears.

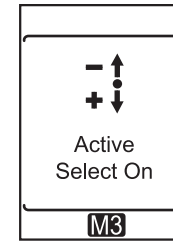


WARNING/REMINDER INDICATIONS cont.

Active select*

The **Active Select On** animation illuminates when the automatic transmission* active select mode is enabled.

Refer to *Automatic transmission* in chapter 4.



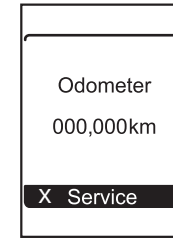
Service error

If the **Contact Dealer** animation illuminates when driving, it indicates a fault in the instrument panel. Contact your Holden Dealer as soon as possible.

The **Contact Dealer** animation is displayed until the **TRIP** button or the ENTER switch are pressed. It then reverts to the original trip computer display.

X Service appears at the bottom of the display and remains illuminated until the problem has been rectified.



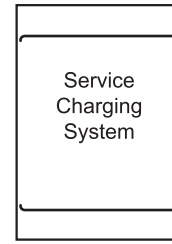


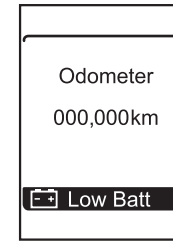
Service charging system

If the **Service Charging System** animation illuminates and a chime sounds, it indicates a fault in the battery charging system. Contact your Holden Dealer as soon as possible.

The **Service Charging System** animation is displayed until the **TRIP** button or the ENTER switch are pressed. The animated symbol then reverts to the original trip computer display.

Low Batt appears at the bottom of the display and remains illuminated until the problem has been rectified.



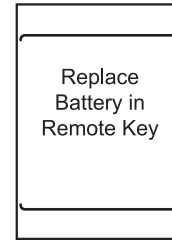


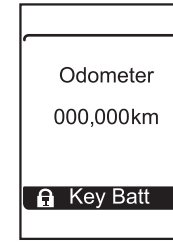
Replace battery in remote key

If the **Replace Battery in Remote Key** animation illuminates and a chime sounds, it indicates the battery in the key needs replacing. Contact your Holden Dealer as soon as possible.

The **Replace Battery in Remote Key** animation is displayed until the **TRIP** button or the ENTER switch are pressed. The animated symbol then reverts to the original trip computer display.

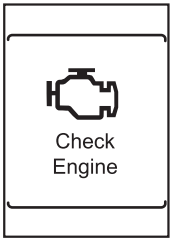
Key Batt appears at the bottom of the display and remains illuminated until the problem has been rectified.





WARNING/REMINDER INDICATIONS cont.

Check engine warning



If the **Check Engine** animation and the Malfunction Indicator Lamp (MIL) illuminate and stay on when driving, the system may require servicing. Although the vehicle may still be drivable and not require towing, take the vehicle to a Holden Dealer as soon as possible.

If the **Check Engine** animation illuminates and the MIL flashes while driving, reduce the vehicle's speed and load, until the lamp stops flashing, then take the vehicle to a Holden Dealer as soon as possible.

The **Check Engine** animation is displayed until the **TRIP** button or the ENTER switch are pressed. It then reverts to the original trip computer display.

Refer to *Malfunction Indicator Lamp (MIL)* further on in this chapter.

Safety mode





If the Safety Mode Active and Power Reduced animations illuminate alternately when driving, it indicates a fault in the engine control system. Although the vehicle may still be driveable, the accelerator input available may be limited, resulting in reduced power. Have the problem fixed by your Holden Dealer as soon as possible.

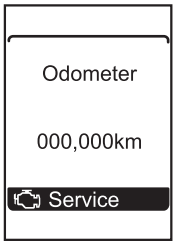
The **Safety Mode Active** and **Power Reduced** animations are displayed until the **TRIP** button or the ENTER switch are pressed. They then revert to the original trip computer display.



⚠ **Safety** appears at the bottom of the display and remains illuminated until the problem has been rectified.

Service vehicle soon



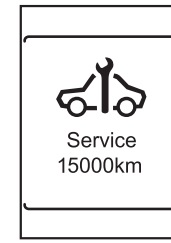


If the **Service Vehicle Soon** animation illuminates when driving, it indicates that a fault has occurred in one of the ancillary systems of the vehicle. Although the vehicle may still be drivable, take the vehicle to your Holden Dealer, as soon as possible. Excess driving may result in vehicle damage.

The **Service Vehicle Soon** animation is displayed until the **TRIP** button is pressed. The animated symbol then reverts to the original trip computer display. **Service** appears at the bottom of the display and remains illuminated until the problem has been rectified.

WARNING/REMINDER INDICATIONS cont.

Service

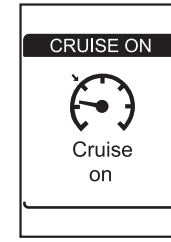


The **Service** animation first appears with the spanner flashing 1,000 km before a service is due, giving you time to arrange for the service to be carried out. The message is shown for 10 seconds or until the **TRIP** button is pressed whenever the ignition is switched on or off. This will happen until the trip computer is reset. When the service is overdue, the whole icon flashes for 10 seconds when the ignition is switched on or off. Refer to the Service/warranty booklet in the glovebox for further information on servicing.

Note This reminder is calculated only by distance. Remember that if driving infrequently, special servicing may be required. Refer to the Service/warranty booklet in the glovebox.

The **Service** message is reset when your Holden Dealer services the vehicle.

Cruise control



The **Cruise On** animation illuminates when the cruise control is activated and ready for use.

Refer to *Cruise control* further on in this chapter.

Alarm activated



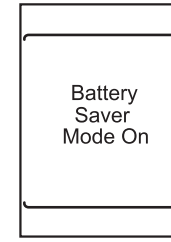


If the alarm has been activated, the **Alarm Activated** animation appears for about one second followed by a animation showing which trigger point has activated the alarm. If there is more than one trigger point, an animation for each of them will follow.

Each animation will be displayed for about one second before the display returns to the **Alarm Activated** animation. The animations are shown in a continuous cycle until the **TRIP** button is pressed.

Refer to *Break-in* in chapter 2.

Battery saver mode on



If the **Battery Saver Mode On** animation illuminates, it indicates that the battery voltage level is low.

WARNING/REMINDER INDICATIONS cont.

Driver's seatbelt warning lamp



The warning lamp reminds the driver to fasten their seatbelt.

If the driver's seatbelt is not fastened when the ignition is switched to the ON or START position, the warning lamp illuminates and the chime sounds for approximately 20 seconds.

If the driver's seatbelt is not fastened and the vehicle's speed reaches 25 km/h, the warning lamp will flash, the chime will sound and the **Fasten Drv's Seat Belt** animation illuminates until the driver's seatbelt is fastened.

Front passenger's seatbelt warning lamp*



The warning lamp reminds the front seat passenger to fasten their seatbelt.

If the front passenger's seatbelt is not fastened within 25 seconds of switching the ignition to the ON or START position, the warning lamp illuminates and the chime sounds for approximately 20 seconds.

If the passenger's seatbelt is not fastened and the vehicle's speed reaches 25 km/h, the warning lamp will flash, the chime will sound and the **Fasten Pas's Seat Belt** animation illuminates until the passenger's seatbelt is fastened.

Fasten driver's seatbelt

If the driver's seatbelt is not fastened and the vehicle's speed reaches 25 km/h, the warning lamp will flash, the chime will sound and the **Fasten Drv's Seat Belt** animation illuminates until the driver's seatbelt is fastened.



Fasten passenger's seatbelt*

If the passenger's seatbelt is not fastened and the vehicle's speed reaches 25 km/h, the warning lamp will flash, the chime will sound and the **Fasten Pas's Seat Belt** animation illuminates until the passenger's seatbelt is fastened.



Fasten seatbelts*

If the driver's and front passenger's seatbelts are not fastened and the vehicle's speed reaches 25 km/h, the and warning lamps will flash, the chime will sound and the **Fasten Seat Belts** animation illuminates until both seatbelts are fastened.



WARNING/REMINDER INDICATIONS cont.

Fog lamp indicator*



The ≠D indicator lamp illuminates when the fog lamps are on. Refer further on in this chapter for information on the operation of the fog lamps.

High beam indicator lamp



The ≡D indicator lamp illuminates when the headlamp high beams are on.

Turn signals



The appropriate arrow flashes when the lever on the right side of the steering column is moved up or down with the ignition switched on.

- Both arrows flash when the hazard warning flasher is switched on. Refer further on in this chapter for information on the hazard warning flasher.
- The turn signal lamps flash at a quicker rate if a bulb has blown.

Security warning lamp



The warning lamp flashes (approximately once every second) when the vehicle security system is activated.

Malfunction Indicator Lamp (MIL)



This vehicle is fitted with an emission monitoring system. The lamp illuminates when the ignition is switched on and extinguishes shortly after the engine starts to run.

If the lamp illuminates and stays on when driving, the system may require servicing. Although the vehicle may still be drivable and not require towing, take the vehicle to a Holden Dealer as soon as possible.

If the lamp flashes while driving, reduce the vehicle's speed and load, until the lamp stops flashing, then take the vehicle to a Holden Dealer as soon as possible.

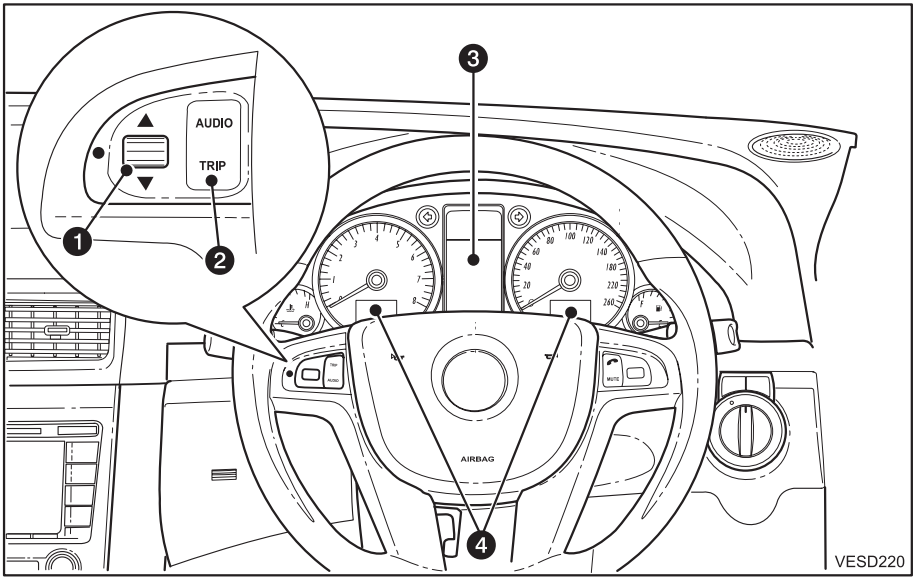
Refer to *Check engine warning* previously in this chapter.

Door ajar lamp



The door ajar lamp illuminates when any of the doors or tailgate is open or not completely closed.

TRIP COMPUTER



On vehicles with a single-window display, the trip computer is shown on the centre display ❸. Refer to *Single-window display* further on in this section.

On vehicles with a triple-window display*, the trip computer is shown on the centre display ❸ and on the smaller displays ❹. Refer to *Triple-window display* further on in this section.

CONTROLS

Press the **TRIP** button ❷ on the left-hand spoke of the steering wheel to scroll between the trip computer displays and to highlight the values.

When the values are highlighted, press the ENTER switch ❶ (push down on the scroll wheel) to the left of the **TRIP** button to reset the values.

Note

- When scrolling to a display, the values are highlighted for a short period. If you wish to reset the values, press the ENTER switch while the values are highlighted. If you do not press the ENTER switch, the highlighting disappears. Press the **TRIP** button again to highlight the values and press the ENTER switch to reset them.
- When the ignition is switched on, the trip computer displays the same functions as when the ignition was last switched off.

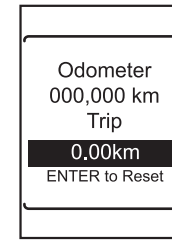
Customisable feature

The trip computer can be customised to suit your requirements. Customisable functions and features are marked with a diamond shaped icon (◊). Refer to *Customisation menu* further on in this chapter.

TRIP COMPUTER cont.

SINGLE-WINDOW DISPLAY

Odometer/tripmeter

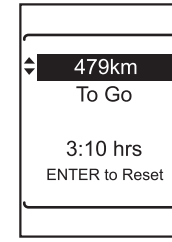


The odometer records kilometres travelled since the vehicle was built. The tripmeter shows the kilometres travelled from the start of a particular trip.

To reset only the tripmeter to zero, highlight the tripmeter value and press the ENTER switch for more than three seconds.

Note If the ENTER switch is pressed briefly this will reset the average speed and average fuel values as well.

Distance/time to go◊



At the start of a trip, estimate distance to arrival (for example, from maps, road signs). Rotate the ENTER switch up or down (▲ or ▼) until the display shows the estimated trip distance. When driving, the computer constantly updates time to arrival, based on changing driving speeds. Use the ENTER switch to adjust the kilometres any time this display is shown. Time to go is shown in hours and minutes and is only shown if the distance to go is more than zero.

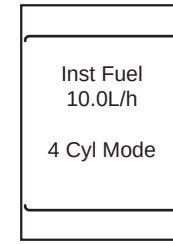
Range (excluding LPG vehicles)



Range is an estimate of how far the vehicle will travel on the current amount of fuel. It is based on previous fuel usage and is frequently updated. As conditions become suited to more economical driving the range may increase, for example from city to highway driving.

In addition, movement of fuel in the tank can cause the reading to fluctuate when the fuel level is low.

Instantaneous fuel*



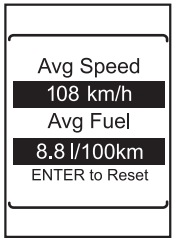
Shows instantaneous fuel consumption in litres per 100 km when driving. When vehicle speed drops below 10 km/h, the value is shown in litres per hour.

Active Fuel Management (AFM) shows how many cylinders are currently active. The amount of cylinders active reduces from 8 to 4 in certain driving conditions, when less engine power is required. The engine will reactivate the other cylinders when additional power for acceleration or load is required.

This feature will only display when cylinder mode is activated in the Customisation menu.

TRIP COMPUTER cont.

Average speed/average fuel (excluding LPG vehicles)



Avg Speed shows the average speed (while the engine is running) since the trip computer was reset.

Avg Fuel shows average fuel used since the trip computer was reset.

To reset only the **Avg Speed** or **Avg Fuel**, highlight either of the values and press the ENTER switch for more than three seconds.

Note

- If the ENTER switch is pressed briefly this will reset the tripmeter as well.
- After resetting, a high fuel consumption figure may appear initially due to the short distance travelled and the large amount of fuel used when accelerating.

Overspeed



Overspeed allows the driver to set a speed that they do not want to exceed. The **OverSpeed** animation will illuminate in the display and a chime will sound to warn that the vehicle's speed is equal or has exceeded the preselected value. During an overspeed warning, the overspeed display is shown, allowing the driver to make adjustments.

Setting the overspeed warning



When the **OverSpeed** display is shown, press the **TRIP** button to highlight the overspeed mode.

Rotate the ENTER switch up or down (▲ or ▼) to scroll through and highlight one of the following options:

- **Off**
- **Manual**
- **Preset 1** (default setting 60 km/h)
- **Preset 2** (default setting 80 km/h)
- **Preset 3** (default setting 100 km/h)
- **Preset 4** (default setting 110 km/h)

The corresponding value is shown on the display.

The selection is set automatically after a few seconds.

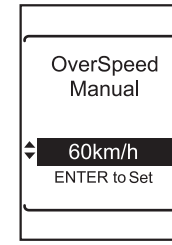
To switch off the overspeed warning, rotate the ENTER switch up or down (▲ or ▼) to highlight **Off**.

Note The overspeed values can be set to a speed of 20 km/h or higher. Adjusting it to a speed below 20 km/h will switch off the overspeed.

TRIP COMPUTER cont.

To adjust the **Manual** overspeed value:

1. Rotate the ENTER switch up or down (▲ or ▼) to highlight **Manual** and press the ENTER switch to highlight the current value.
2. Rotate the ENTER switch up or down to select the desired value in 5 km increments.
3. Press the ENTER switch to confirm the setting.

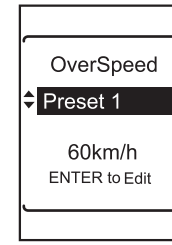


To adjust the **Manual** overspeed value to the current vehicle's speed:

1. Rotate the ENTER switch up or down (▲ or ▼) to highlight **Manual** and press the ENTER switch to highlight the current value.
2. Press and hold the ENTER switch for more than 3 seconds to set the value to the nearest 5 km/h step above the current vehicle's speed.

To select a **Preset**, rotate the ENTER switch up or down (▲ or ▼) to highlight the desired preset.

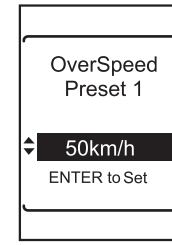
Note While the vehicle's speed is 10 km/h or below, each of the presets can be altered and values can be stored for future use.



To alter a preset:

1. Rotate the ENTER switch up or down (▲ or ▼) to highlight the desired preset and press the ENTER switch.
2. Rotate the ENTER switch up or down to select the desired value in 1 km increments.
3. Press the ENTER switch to confirm the setting.

Note The presets are automatically arranged in ascending order.



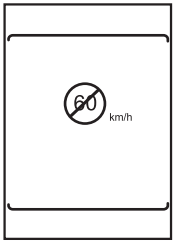
Adjusting the setting during an overspeed warning

While the overspeed warning is displayed:

- Rotate the ENTER switch up or down (▲ or ▼),
  - to adjust the value when in **Manual** mode.
  - to select a different preset when in **Preset** mode.
- Press and hold the ENTER switch for more than 3 seconds to change the value to the nearest 5 km/h step above the current vehicle's speed. If **Preset** mode was selected, this will change it to **Manual** mode.

TRIP COMPUTER cont.

Underspeed chime◊



If an overspeed warning appeared and the vehicle's speed drops below the set value, underspeed provides a chime to indicate this. Underspeed can be switched on and off in the Customisation menu.

Refer to *Customisation menu* further on in this chapter.

Digital speedometer◊



When the digital speedometer is enabled in the Customisation menu, the vehicle's speed is also displayed numerically on the instrument panel's centre display.

Refer to *Customisation menu* further on in this chapter.

Trip computer notes

- If the wrong buttons are accidentally pressed, causing the display to show anything other than normal, switch the ignition off then on again (only when the vehicle is stationary).
- Several warning lamps are linked to the instrument panel display windows. Refer to *Warning/reminder indications* previously in this chapter.
- When the overspeed warning symbol is first shown, the overspeed trip computer display is automatically shown for 10 seconds. This indicates the preselected speed and allows you to adjust it if required. After 10 seconds, the trip computer returns to its previous display.
- Some displays change the units of measurement over time. For example, if the time to arrival is above 99 hours and 59 minutes, only hours will be shown. Time to arrival also shows 10 minute units above 2 hours, 5 minute units below 2 hours and 1 minute units below 10 minutes.
- The personal identity key* system stores different settings used by different keys. If the vehicle is fitted with this system, the trip computer stores the last selected settings. When the button on the key is pressed, the last set of displays and overspeed settings will be recalled. Refer to *Personal identity keys* in chapter 2.

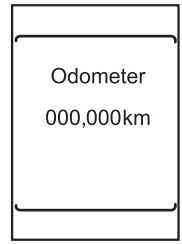
TRIP COMPUTER cont.

*TRIPLE-WINDOW DISPLAY**



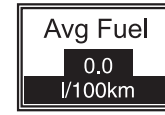
Average Speed

Shows the average speed (while the engine is running) since the trip computer was reset.



Odometer

Records kilometres travelled since the vehicle was built.

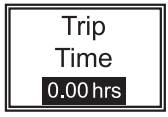


Average Fuel (excluding LPG vehicles)

Shows average fuel used since the trip computer was reset. After resetting, a high fuel consumption figure may appear initially due to the short distance travelled and the large amount of fuel used when accelerating.

To reset only trip distance to zero, highlight the values and press and hold the ENTER switch for more than three seconds.

To reset **Average Speed**, **Avg Fuel** and **Trip Distance**, highlight any of the values and press the ENTER switch briefly.



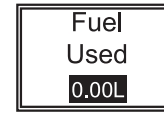
Trip Time◊

Shows the engine running time since the trip computer was reset. If this exceeds 99 hours and 59 minutes, the trip time is displayed in hours only.



Trip Distance◊

Shows the kilometres travelled from the start of a particular trip.

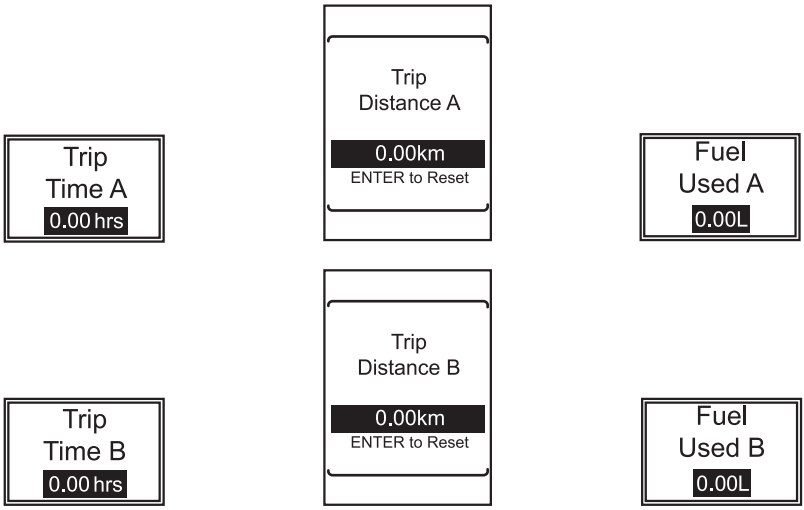


Fuel Used◊ **(excluding LPG vehicles)**

Shows the total litres of fuel used since the trip computer was reset.

Highlight the values and press the ENTER switch to reset them to zero.

TRIP COMPUTER cont.



Trip Computer A&B◊ (excluding LPG vehicles)

When selecting the Trip Computer A&B in the Customisation menu, two sets of trip time/trip distance/fuel used displays will appear. There are now two different sets of trip displays counting.

One can be used for the complete journey and the other for shorter distances during the journey.

Note If the Trip Computer A&B function is selected, the **Average Speed** and **Avg Fuel** displays indicate Trip Computer A.

For information on how to select Trip Computer A or Trip Computer A&B, refer to *Customisation menu* further on in this chapter.

To reset the values to zero, highlight them and press the ENTER switch.

Note If **Trip Distance A** is reset, the **Average Speed** and **Avg Fuel** displays will also be reset to zero.

TRIP COMPUTER cont.



Time To Arrival◊

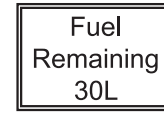
Shows trip time to arrival in hours and minutes, based on distance to arrival. If this exceeds 99 hours and 59 minutes, the time to arrival displays in hours only.



Distance To Arrival◊

Shows the distance to arrival in kilometres.

At the start of a trip, estimate the distance to arrival (for example, from maps, road signs). Rotate the ENTER switch up or down (▲ or ▼) until the display shows the estimated trip distance. When driving, the computer constantly updates the time to arrival, based on changing driving speeds. Use the ENTER switch to adjust the kilometres any time this display is shown.



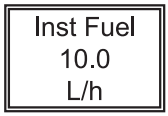
Remaining Fuel◊

Shows the litres of fuel left in the fuel tank, rounded to the nearest 5 litres.

When the low fuel warning is activated, **LOW** is displayed instead of litres.

Note Time To Arrival and **Distance To Arrival** screens are not available if trip computer A&B function is selected.

TRIP COMPUTER cont.



Instantaneous Fuel (excluding LPG vehicles)

Shows instantaneous fuel consumption in litres per 100 km when driving. When speed drops below 10 km/h, the value is shown in litres per hour.



Overspeed

Sets the speed you do not want to exceed. When the vehicle speed exceeds the setting, the overspeed warning message and an audible chime warn that you are exceeding the preset value. At that time the trip computer automatically shows the overspeed display, allowing adjustments to be made if required.

For details on the overspeed warning display, refer to *Overspeed*, previously in this chapter.

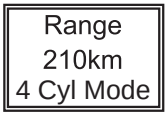
For details on how to set the overspeed value, refer to *Setting the overspeed warning* on the next page.



Range (excluding LPG vehicles)

An estimate of how far the vehicle will travel on the current amount of fuel. It is based on the previous fuel usage and is frequently updated. As conditions become suited to more economical driving the range may increase, for example from city to highway driving.

In addition, movement of fuel in the tank can cause the reading to fluctuate when the fuel level is low.



Active Fuel Management (AFM)*

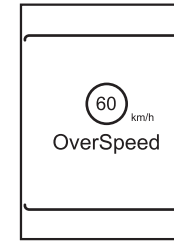
Shows how many cylinders are currently active. The amount of cylinders active reduces from 8 to 4 in certain driving conditions, when less engine power is required. The engine will reactivate the other cylinders when additional power for acceleration or load is required.

For details on how to display the amount of cylinders operating, refer to *Customisation menu* further on in this chapter.

TRIP COMPUTER cont.

Overspeed

Overspeed allows the driver to set a speed that they do not want to exceed. The **OverSpeed** animation will illuminate in the display and a chime will sound to warn that the vehicle's speed is equal or has exceeded the preselected value. During an overspeed warning, the overspeed display is shown, allowing the driver to make adjustments.

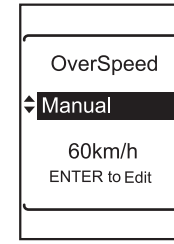


Setting the overspeed warning

When the **OverSpeed** display is shown, press the **TRIP** button to highlight the overspeed mode.

Rotate the ENTER switch up or down (▲ or ▼) to scroll through and highlight one of the following options:

- **Off**
- **Manual**
- **Preset 1** (default setting 60 km/h)
- **Preset 2** (default setting 80 km/h)
- **Preset 3** (default setting 100 km/h)
- **Preset 4** (default setting 110 km/h)



The corresponding value is shown on the display.

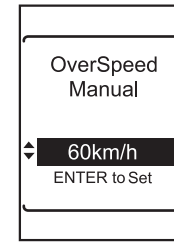
The selection is set automatically after a few seconds.

To switch off the overspeed warning, rotate the ENTER switch up or down (▲ or ▼) to highlight **Off**.

Note The overspeed values can be set to a speed of 20 km/h or higher. Adjusting it to a speed below 20 km/h will switch off the overspeed.

To adjust the **Manual** overspeed value:

1. Rotate the ENTER switch up or down (▲ or ▼) to highlight **Manual** and press the ENTER switch to highlight the current value.
2. Rotate the ENTER switch up or down to select the desired value in 5 km/h increments.
3. Press the ENTER switch to confirm the setting.



To adjust the **Manual** overspeed value to the current vehicle's speed:

1. Rotate the ENTER switch up or down (▲ or ▼) to highlight **Manual** and press the ENTER switch to highlight the current value.
2. Press and hold the ENTER switch for more than 3 seconds to set the value to the nearest 5 km/h step above the current vehicle's speed.

TRIP COMPUTER cont.

To select a **Preset**, rotate the ENTER switch up or down (▲ or ▼) to highlight the desired preset.

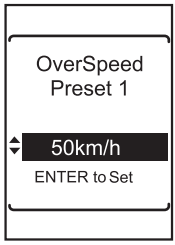
Note While the vehicle's speed is 10 km/h or below, each of the presets can be altered and values can be stored for future use.



To alter a preset:

1. Rotate the ENTER switch up or down (▲ or ▼) to highlight the desired preset and press the ENTER switch.
2. Rotate the ENTER switch up or down to select the desired value in 1 km/h increments.
3. Press the ENTER switch to confirm the setting.

Note The presets are automatically arranged in ascending order.



Adjusting the setting during an overspeed warning

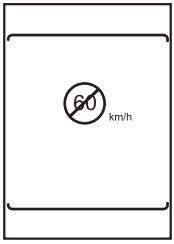
While the overspeed warning is displayed:

- Rotate the ENTER switch up or down (▲ or ▼),
  - to adjust the value when in **Manual** mode.
  - to select a different preset when in **Preset** mode.
- Press and hold the ENTER switch for more than 3 seconds to change the value to the nearest 5 km/h step above the current vehicle's speed. If **Preset** mode was selected, this will change it to **Manual** mode.

Underspeed chime◊

If an overspeed warning appeared and the vehicle's speed drops below the set value, underspeed provides a chime to indicate this. Underspeed can be switched on and off in the Customisation menu.

Refer to *Customisation menu* further on in this chapter.



Digital speedometer◊

When the digital speedometer is enabled in the Customisation menu, the vehicle's speed is also displayed numerically on the instrument panel's centre display.

Refer to *Customisation menu* further on in this chapter.



TRIP COMPUTER cont.

Trip computer notes

- If the wrong buttons are accidentally pressed, causing the display to show anything other than normal, switch the ignition off then on again (only when the vehicle is stationary).
- Several warning lamps are linked to the instrument panel display windows. Refer to *Warning/reminder indications* previously in this chapter.
- When the overspeed warning symbol is first shown, the overspeed trip computer display is automatically shown for 10 seconds. This indicates the preselected speed and allows the driver to adjust it if required. After 10 seconds, the trip computer returns to its previous display.
- Some displays change the units of measurement over time. For example, if the time to arrival is above 99 hours and 59 minutes, only hours will be shown. Time to arrival also shows 10 minute units above 2 hours, 5 minute units below 2 hours and 1 minute units below 10 minutes.
- The personal identity key* system stores different settings used by different keys. If the vehicle is fitted with this system, the trip computer stores the last selected settings. When the button on the key is pressed, the last set of displays and overspeed settings will be recalled. Refer to *Personal identity keys* in chapter 2.

CUSTOMISATION MENU

USING THE CUSTOMISATION MENU





Entering the Customisation menu

Scroll to the Customisation menu using the **TRIP** button and press the ENTER switch.

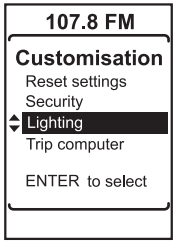
Note The Customisation menu cannot be opened when the vehicle speed is above 10 km/h. At speeds above 10 km/h, the Customisation menu shows **Not Available**.

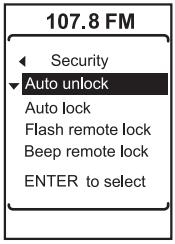
Navigating the menu

To scroll through and highlight the entries within a menu, rotate the ENTER switch up or down (▲ or ▼).

To select an entry, press the ENTER switch.

To exit a menu, scroll to the ◄ symbol at the top left-hand corner of the display and press the ENTER switch.

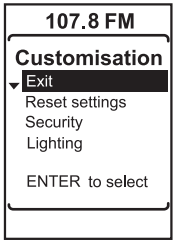




Exiting the Customisation menu

Exit the Customisation menu in one of the following ways:

- Scroll to **Exit** and press the ENTER switch.
- Press the **TRIP** button at any time to return to the trip computer displays.
- Drive the vehicle at more than 10 km/h.
- Switch the ignition off (only if stationary).



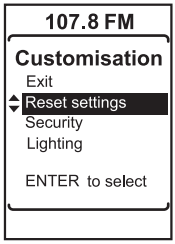
Help screens

There are help screens to assist the driver to understand the features. If selecting a menu item, wait for a few seconds and a help screen pops up with an explanation of the selected feature.

Reset settings

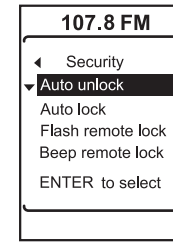
To reset all settings to the factory defaults:

1. Highlight **Reset settings** and press the ENTER switch.
2. Highlight **Yes** or **No** and press the ENTER switch to confirm the setting.



CUSTOMISATION MENU cont.

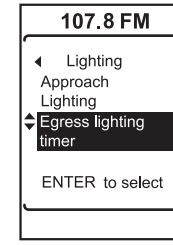
Security



For information on the following features, refer to chapter 2.

- **Auto unlock**
  Choose when you want the doors to unlock automatically.
  - **Off**
    Auto unlock is switched off.
  - **Driver door key out**
    The driver's door will unlock when the key is removed.
  - **Driver door in park** (vehicles with automatic transmission)
    The driver's door will unlock when you put the gear selector lever into **P** (park).
  - **All doors at key out**
    All doors will unlock when the key is removed.
  - **All doors in park** (vehicles with automatic transmission)
    All doors will unlock when you put the gear selector lever into **P** (park).
- **Auto lock**
  Choose when you want the doors to lock automatically.
  - **Off**
    Auto lock is switched off.
  - **At vehicle speed**
    The doors will lock when the vehicle speed is at or above 13 km/h.
  - **Out of Park** (vehicles with automatic transmission)
    All doors will lock when you move the gear selector lever out of **P** (park).
- **Flash remote lock**
  Choose if you want the turn signal lamps to flash when you lock the doors.
- **Beep remote lock**
  Choose if you want the horn to sound when you lock the doors.
- **Flash remote unlock**
  Choose if you want the turn signal lamps to flash when you unlock the doors.
- **Two stage unlock**
  Choose if you want only the driver's door to unlock by pressing once when you unlock the doors.

Lighting

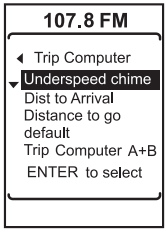


For information on the following features, refer to *Lights* further on in this chapter.

- **Approach lighting**
  Choose if the exterior lamps should illuminate when you unlock the doors.
- **Egress lighting**
  Choose if, and for how long, the exterior lamps should illuminate when you lock the doors.

CUSTOMISATION MENU cont.

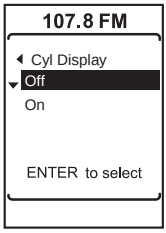
Trip computer



For information on the following features, refer to *Trip computer* previously in this chapter.

- **Underspeed chime**
  Choose if you want the underspeed chime to sound.
- **Distance to go*** (single-window)
  Choose if you want the distance to go display to appear.
- **Distance to Arrival*** (triple-window)
  Choose if you want the distance to arrival display to appear.
- **Distance to go Default**
  The default settings is 500 km. Set the value you want it to be.
  Note Distance to go Default is not available if trip computer A&B function is selected.
- **Trip Computer A+B** (triple-window)
  Choose trip computer A or A+B.
- **Digital speedometer**
  Choose if you want a digital speedometer to appear in the centre display.
- **Rest reminder**
  Choose if you want the rest reminder to be enabled/disabled. Refer to *Warning/ reminder indications* previously in this chapter.

Cylinder mode*

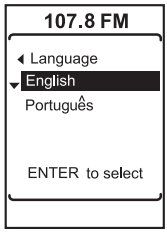


Displays how many cylinders are operating.

- **Off** Choose if you don't want to display how many cylinders are currently active.
- **On** Choose if you want to display how many cylinders are currently active.

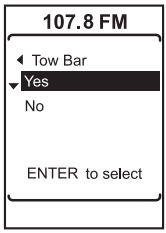
Note Instantaneous fuel is not available for single-window displays if cylinder mode is deactivated.

Language



Choose your preferred language for the displays: English or Portuguese.

Park Assist*

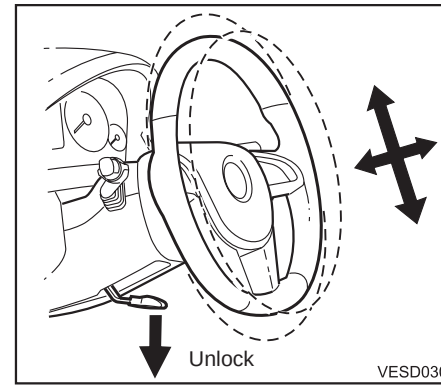


For information on the Park Assist, refer to *Park assist* in chapter 4.

Select if a tow bar is fitted to the vehicle.

STEERING, HORN, HAZARD WARNING

TILT/REACH STEERING



WARNING

Do not attempt to adjust the steering wheel while driving.

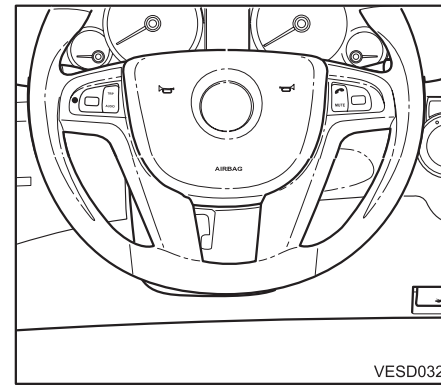
Move the lock lever under the steering column downwards.

Grasp the steering wheel and move it as required. It can be moved up or down, pulled towards you or pushed away from you.

When the steering wheel is in the preferred position, move the lock lever up. Ensure it has locked securely before driving.

HORN

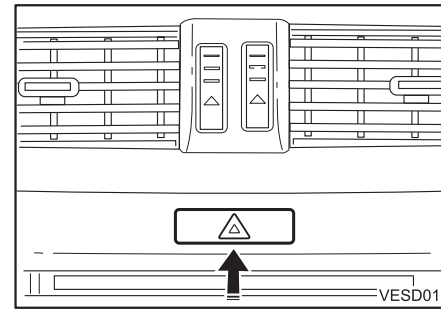
The horn is activated by pressing either side of the steering wheel centre pad.



HAZARD WARNING FLASHER

Press the button to turn the hazard warning flasher on and off. The hazard warning flasher works regardless of the ignition position. When the hazard warning flasher is turned on, all turn signals flash continuously.

Use the hazard warning flasher to warn other drivers any time the vehicle becomes a traffic hazard, day or night. Use of the hazard warning flashers while the vehicle is moving is illegal in some states and countries.



WIPERS AND WASHERS

OPERATING THE WIPERS AND WASHERS

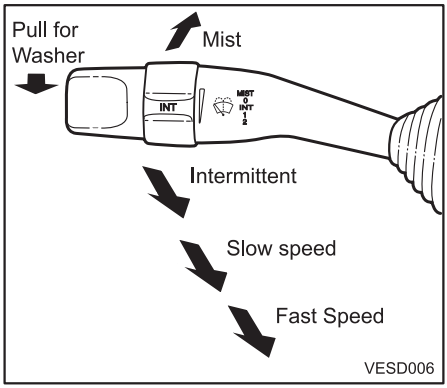
The lever on the left side of the steering column controls the wipers and washers. They operate when the ignition is switched to the ON or ACCESSORIES positions.

WARNING

Never operate the wipers on dry glass, as this will damage the rubber and scratch the glass.

Mist function (MIST)

Move the lever up. The wipers will cycle while holding the lever in this position.



Wipers off (0)

Intermittent wipe (INT)

Move the lever down to the first stop to set the wipers to the intermittent position.

Slow speed (1)

Move the lever down to the second stop.

Fast speed (2)

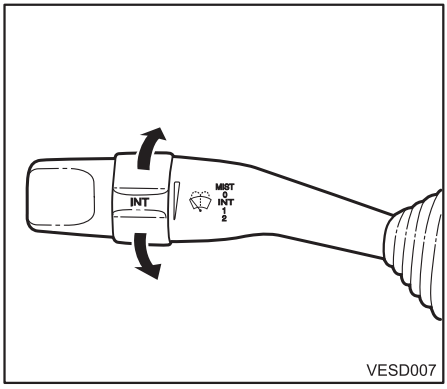
Move the lever down to the third stop.

Variable intermittent wipers

The frequency of the intermittent wipe can be adjusted by rotating the collar, marked **INT**. Rotate the collar down for more frequent wipes, or up for less frequent wipes.

Note

- The variable intermittent wiper frequency is road speed dependent.
- This means that as the vehicle speed increases, so does the wiper rate.



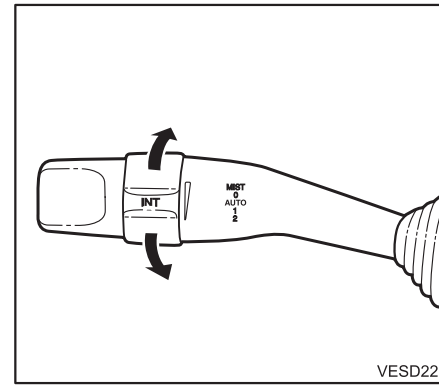
WIPERS AND WASHERS cont.

Auto (rain sensing)*

Move the lever down to the first stop to set the wipers to the **AUTO** position.

If the rain sensor detects water on the windscreen, it switches on the wipers and adjusts their speed automatically.

The sensitivity of the rain sensor can be adjusted by rotating the collar, marked **INT**. Rotate the collar down for higher sensitivity (more frequent wipes), or up for lower sensitivity (less frequent wipes).



VESD225

WARNING

- Switch off the rain sensor by setting the lever to the **0** position before entering a car wash.
- Replace the wiper blades as soon as they do not completely remove water from the windscreen. If the blades are not replaced, the wipers may continue to wipe even though most of the screen is dry.
- To prevent damage to the wiper blades, make sure that the windscreen is fully defrosted before switching on the rain sensor.

Washer

To spray washer fluid onto the windscreen, pull the lever towards you and hold as long as required. The wipers switch on automatically for a short time if they are not already operating.

When topping up the washer fluid, refer to *Washer fluid level* in chapter 7.

REAR WIPER AND WASHER (SPORTWAGON)

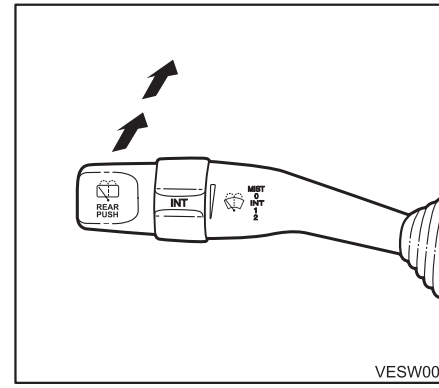
Wiper

Push the lever forward to the first stop.

Note The wiper operates at an intermittent rate.

Washer

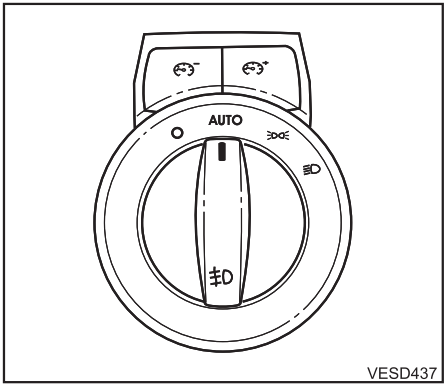
Push the lever forward to the second stop and hold as long as required. The wiper switches on automatically for a short time if not already operating.



VESW001

LIGHTS

LIGHTS SWITCH



O = Off

Turns the headlamps and park lamps off.

AUTO = Automatic headlamps

Headlamps and park lamps switch on and off automatically. Select high and low beam using the lever.

Note Headlamps and park lamps switch on automatically when wipers are operating.

= Park lamps

Turns on the park, tail, rear number plate lamps and instrument panel lighting.

= Headlamps

Turns on the headlamps (in addition to all the park lamps).

= Fog lamps*

When the headlamp switch is set to park lamps or headlamps, pull the switch outwards to turn the fog lamps on. Push the switch inwards to turn them off. The indicator lamp illuminates when the fog lamps are on.

Note The fog lamp switch can also be pulled out with the switch in the auto position. If left in this position, whenever the park lamps and headlamps turn on automatically, so will the fog lamps.

= Instrument lighting dimmer

The instruments are automatically illuminated when the park lamps or headlamps are switched on.

To adjust the instrument lighting, hold the bright + or dim - button until the desired level is reached.

Night panel mode

Press both instrument lighting dimmer buttons simultaneously to enable night panel mode for country driving. Press and hold either button again to switch instrument lighting back on.

Note

- When Night panel mode is enabled the speedo, information displays and warning reminders remain illuminated while all other instrument panel illumination is switched off.
- In night panel mode, only the gauges that are illuminated will be active.

LIGHTS cont.

EXTERIOR LAMPS

Automatic headlamps

When the headlamp switch is in the **AUTO** position, the headlamps and park lamps automatically switch off and on according to the ambient light. Select high and low beam using the lever.

Note

- The light sensor is centrally mounted on the top of the dashboard. Be careful not to cover up the sensor, as this may affect operation. Occasionally wipe the sensor clean.
- The headlamps, park lamps, reverse lamps and puddle lamps* are activated by the approach lighting feature. Refer to *Approach lighting* below.

WARNING

The automatic headlamp sensor cannot replace the driver's personal judgement of the prevailing light conditions. For example, the sensor is unable to detect foggy conditions. In situations such as this, set the lights switch to ≡D, otherwise your safety and that of other road users could be endangered.

Automatic headlamps off

Leaving the headlamps or park lamps on when the engine is not running will eventually flatten the battery. To prevent this, the headlamps and park lamps switch off when the ignition is switched to LOCK. The lamps stay off until the ignition is switched on or the lamps are turned on using the lights switch.

Note If you wish to have the lamps on when leaving the vehicle, switch the ignition to LOCK then turn the lights switch first to **AUTO** then to park lamps or headlamps.

Egress lighting

The headlamps can be set to switch off after an adjustable time delay, once the ignition has been switched to the LOCK position. This is useful for illuminating a path.

To set the time delay from when the ignition is switched to LOCK to when the lamps automatically switch off, refer to *Customisation menu* previously in this chapter.

Approach lighting

This feature is designed to provide additional security when returning to the vehicle at night. When pressing the unlock button on the ignition key, the vehicle's headlamps, park lamps, reverse lamps and puddle lamps* will illuminate for a predefined time (60 seconds).

Note The lamps only turn on if the headlamps switch is left in the **AUTO** position.

To enable/disable the function, refer to *Customisation menu* previously in this chapter.

LIGHTS cont.

Personal identity keys*

When the button is pressed on the key, the system identifies the key and sets the headlamp time delay to the last adjustments used for that key. Refer to *Personal identity keys* in chapter 2.

Fog lamps*

Fog lamps provide a different illumination of the road to the usual headlamp beam. Depending on the density of the fog, a different combination of lamps will improve vision. In very heavy fog, vision may be improved by turning the headlamps off, and just having the park lamps and fog lamps on. When the fog lamps are turned on, the fog lamp indicator illuminates on the instrument panel.

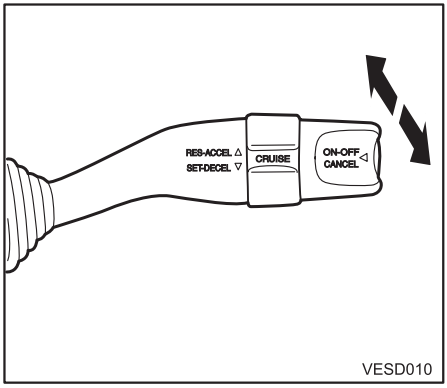
Note Driving speed should be reduced in fog. Check your State laws regarding use of fog lamps when driving.

High/low beam

With the headlamps on, push the lever on the right side of the steering column away from you until you feel a click, then release it. The headlamps change from low to high beam. The high beam indicator lamp illuminates on the instrument panel. To return to low beam, pull the lever towards you.

To flash the high beam lamps, pull the lever towards you. The lamps remain on high beam as long as the lever is held.

Note The high beam lamps can be flashed even if the headlamps and/or ignition are switched off.

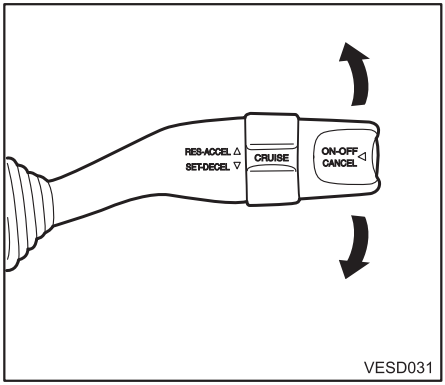


Turn signals

- To signal a turn, push the lever on the right side of the steering column in the same direction you turn the steering wheel.
- To signal a lane change, push the lever part way in the direction you turn the steering wheel. The turn signals will flash 3 times to indicate a lane change. The lever returns to the neutral position when released. To cancel the lane change function, push the lever in either direction.

A green arrow on the instrument panel flashes when the lights are in operation.

Note In some turns (such as changing lanes) the steering wheel is not turned far enough to cancel the turn signal.



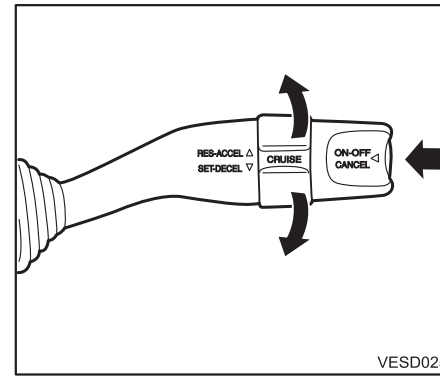
CRUISE CONTROL

OPERATING CRUISE CONTROL

The cruise control maintains the vehicle's speed without you having your foot on the accelerator pedal.

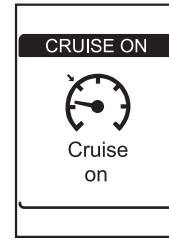
Note The cruise control will only operate at speeds above 38 km/h.

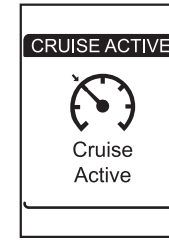
The cruise control lever is located on the right side of the steering column.



Setting a speed

1. Switch on the ignition.
2. Press the **ON-OFF/CANCEL** switch at the end of the lever. The **CRUISE ON** animation appears in the information display to indicate that the cruise control is enabled.
3. When travelling at the desired speed, rotate the collar down to the **SET-DECEL** position. The **CRUISE ACTIVE** animation appears in the information display. This indicates that the cruise control is now controlling the vehicle's speed. Release both the accelerator pedal and the collar.





Note The animation will only be displayed for a few seconds. The display then reverts to the original trip computer display. **CRUISE ON** or **CRUISE ACTIVE** appears at the top of the display.

Adjusting the set speed

- To reduce the set speed, rotate the collar down to the **SET-DECEL** position.
- To increase the set speed, rotate the collar up to the **RES-ACCEL** position.
- After releasing it, the new speed will be maintained.

Note To change the speed in small amounts, momentarily rotate the collar.

CRUISE CONTROL cont.

Pausing the cruise control



Press the brake pedal, press the clutch pedal (if the vehicle is fitted with a manual transmission) or press the **ON-OFF/CANCEL** switch once. This deactivates the cruise control. The **Cruise Inactive** animation appears, but cruise control retains the speed in its memory.

To regain the stored speed, momentarily rotate the collar to the **RES-ACCEL** position.

Note Holding it in the **RES-ACCEL** position will cause the vehicle to accelerate.

Turning the cruise control off



Press the **ON-OFF/CANCEL** switch twice.

The **Cruise Off** animation appears.

Note

- Pressing the **ON-OFF/CANCEL** switch once pauses the cruise control but keeps the system ready and the speed in the memory.
- A second press turns the system off completely and wipes the speed memory clear.
- A third press turns the system back on to ready, without any speed memory.
- Switching off the ignition deactivates cruise control and clears the speed memory.

WARNING

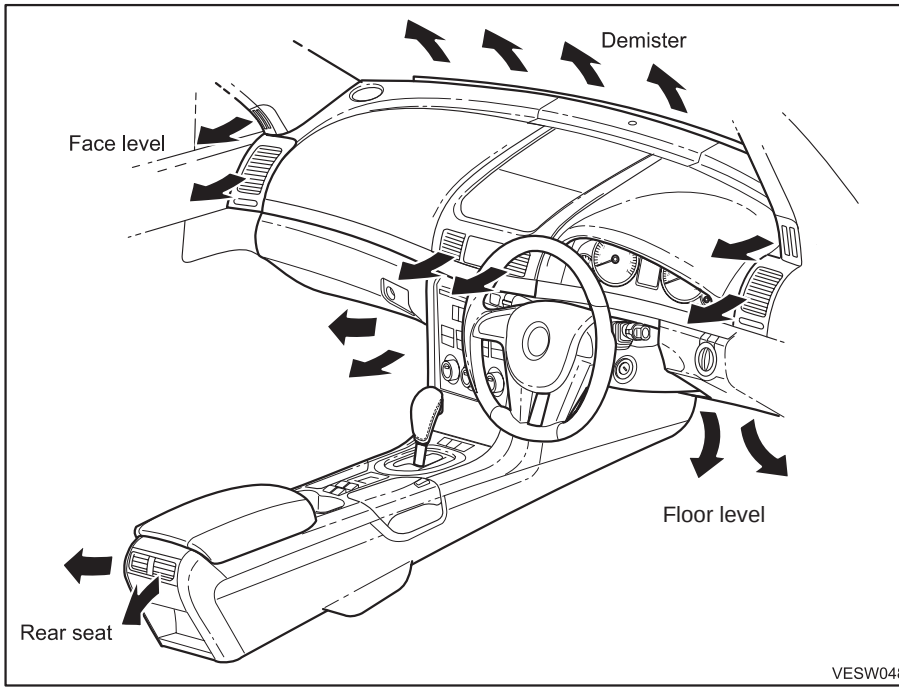
- Do not use the cruise control when road or driving conditions require varying speeds. A constant speed is not practical in heavy or varying traffic or on winding, slippery or rough roads.
- Remember that when **CRUISE ACTIVE** is displayed, the cruise control is maintaining the vehicle's speed. Taking your foot off the accelerator pedal does not reduce the speed. To deactivate the cruise control, either press the brake pedal, press the clutch pedal (if the vehicle has a manual transmission) or push the **ON-OFF/CANCEL** switch.
- The cruise control does not apply the vehicle's brakes. The vehicle may gain speed when going down steep hills.
- When climbing steep hills (particularly when towing), the vehicle may lose speed. In this case, use the accelerator pedal. Release the accelerator pedal when the speed returns to the set speed.
- The cruise control is cancelled if the Electronic Stability Program (ESP®) becomes active, indicated by the **Stability Ctrl Assistance** animated warning on the instrument panel display.

VENTILATION SYSTEM

The vehicle features a flow-through ventilation system for comfort. Under reasonable conditions, it should not be necessary to open the windows at any time. Outside air is drawn into the vehicle through the opening between the bonnet and the windscreen, unless recirculation has been selected. Do not allow this grille to become clogged with debris, such as leaves or snow. Any leaves should be removed each time the vehicle is washed (recommended weekly).

VENTS

The air can be directed to different types of vents.



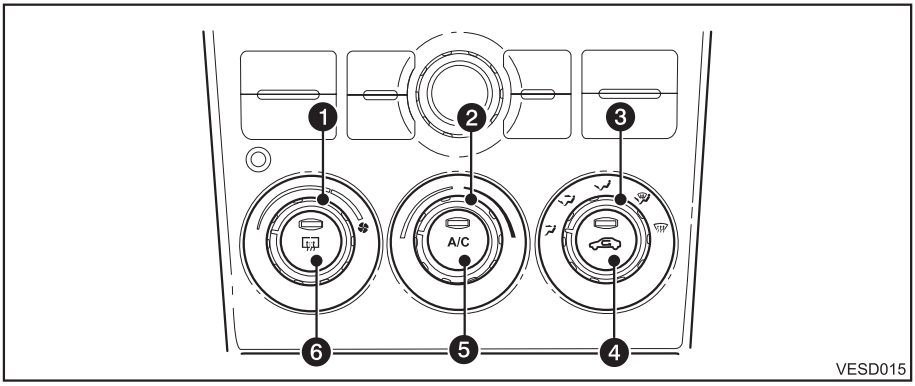
The face and rear seat vents have adjustable vanes which can be adjusted up or down and left or right to allow directional control of air flow.

These vents have shut-off doors which can also be used to adjust the air volume to suit individual comfort. For example, air flow at the centre vents can be reduced to enhance air flow at the rear seat vents.

The floor-level and demister outlets are fixed, as these direct air to the windscreen, feet and side windows.

*MANUAL HEATER, AIR CONDITIONING**

CONTROLS



❶ Fan speed
❷ Temperature control
❸ Mode control
❹ Recirculation button
❺ Air conditioning (A/C) button*
❻ Rear window demister

Fan speed

Turn the outer button ring ❶ clockwise to increase the fan speed or anticlockwise to reduce it. Turn it fully anticlockwise to turn the fan off.

Note The air conditioning will not work when the fan is off.

Temperature control

Turn the outer button ring ❷ clockwise (warmer) or anticlockwise (cooler).

Mode control

Turn the outer button ring ❸.

Set it to one of the following positions:

Face mode directs air to both dashboard and console vents.

Bi-level mode directs approximately half of the air to both dashboard and console vents, then directs most of the remaining air to the floor outlets. Cooler air is directed to the upper outlets and warmer air to the floor outlets.

Floor mode directs most of the air to the floor outlets, with some air directed to the outer dashboard vents and a little air directed to the windscreen and side windows.

Floor and windscreen demist (blend) mode directs the air between the windscreen and floor outlets, with some air supplied to the outer dashboard vents and side window demist outlets.

Windscreen demist mode directs most of the air to the windscreen, with some air directed to the side window demist outlets and outer dashboard vents.

Note When is selected, the air conditioning is switched on automatically to optimise demisting performance. In this mode the air conditioning cannot be switched off and recirculation mode cannot be switched on.

MANUAL HEATER, AIR CONDITIONING cont.*

A/C button*

Press the **A/C** button ❺ to switch the air conditioning on and off.

The lamp in the button illuminates when the air conditioning is on.

Note

- The fan must be on before the air conditioning will work.
- When or is selected the air conditioning is automatically switched on provided the fan is on.
- When A/C is switched on, the air conditioning removes moisture and heat from the air.
- Air conditioning should be switched on for at least 5 to 10 minutes once every 2 weeks to lubricate the air conditioning seals, even in winter.
- The air conditioning cannot be turned off in demist mode. If the A/C button ❺ is pressed, the lamp in the button will flash 3 times and stay on.

Recirculation button

Press the button ❹ to switch the air intake between recirculated air and outside air.

The lamp in the button illuminates when recirculation is selected.

Note

- Recirculation reuses interior air and is therefore not recommended for long periods of time.
- If recirculation mode is used for an extended period of time, the system will automatically let some fresh air into the cabin for ventilation.
- Do not use recirculation if occupants are smoking.
- Recirculation cannot be activated in demist mode. If the button ❹ is pressed, the lamp in the button will flash 3 times and stay off.

Rear window demist button

Press the button ❻ to turn the rear demister on. Press the button again to turn the rear demister off.

The lamp in the button illuminates when the rear demister is switched on.

Note To avoid unnecessary electrical consumption, the rear demister switches off automatically.

MANUAL HEATER, AIR CONDITIONING cont.*

Air conditioning

For a quick cool down when first entering the vehicle on a hot day:

1. Press the **A/C** button ❺ to switch on the air conditioning.
2. Press the button ❹ to switch on the recirculation.
3. Turn the temperature control ❷ to the coldest setting.
4. Turn the fan ❶ to a high speed.
5. Open the windows to allow the hot air to escape.
6. After a minute or two, close the windows, as the air conditioning works most effectively with the windows closed.
7. When the interior cools down, switch off the recirculation and select . This will maintain the best comfort conditions during extended driving.

Note The coolest temperature is achieved when recirculation is selected. This can be used in slow city traffic or when the vehicle is stationary in very hot weather. Occasionally switch recirculation off to allow outside air to enter the vehicle.

Demisting

If the side windows or windscreen fog up on a cold day:

1. Turn the fan ❶ to a high speed.
2. Turn the mode control ❸ to , which automatically turns on the air conditioning.
3. Turn the temperature control ❷ to a warm setting.

This circulates warm, dehumidified air throughout the vehicle, demisting the windows.

Note The air conditioning reduces humidity to improve demisting performance.

MANUAL HEATER, AIR CONDITIONING cont.*

NOTES

Unsealed roads (prevention of dust entry)

When following another vehicle on unsealed roads (and the dust is airborne), select recirculation. If the dust is not airborne select outside air (recirculation off) and set the fan to high speed. This builds up positive air pressure to help prevent dust entry. Ensure in both cases that all windows are closed.

Note Recirculation reuses interior air and is therefore not recommended for long periods of time.

Automatic transmission*

If the vehicle is stopped for long periods in hot weather with the engine running and the air conditioning operating, select **N** (neutral) or **P** (park) with the transmission gear selector.

Hissing

Occasionally a slight hissing sound may be heard for a short time when the air conditioning switches off and pressure in the system equalises. This is normal.

Water

Water condensation forms when the air conditioning is operating, this condensation is discharged underneath the vehicle. Therefore, traces of clean, clear water on the ground underneath the vehicle are normal under these circumstances.

Engine performance/fuel economy

The air conditioning uses power from the vehicle's engine. A small decrease in engine power and a slight increase in fuel consumption will be noticed when the air conditioning is in use. When driving at high speeds, the air conditioning compressor may switch off momentarily so that full engine power is available.

The system is protected by switches that guard against abnormal loads and loss of refrigerant. The air conditioning compressor may switch off until the fault is rectified. Have the system checked by a Holden Dealer if this occurs.

Cigarette smoke

If occupants are smoking, it is recommended that the recirculate position not be used.

Note Recirculate mode reuses interior air and is therefore not recommended for long periods of time.

Regular running

It is important that once every 2 weeks, with the engine running, the air conditioning is switched on for 5 to 10 minutes (even in winter) to lubricate the air conditioning system seals.

Pollen/dust filter

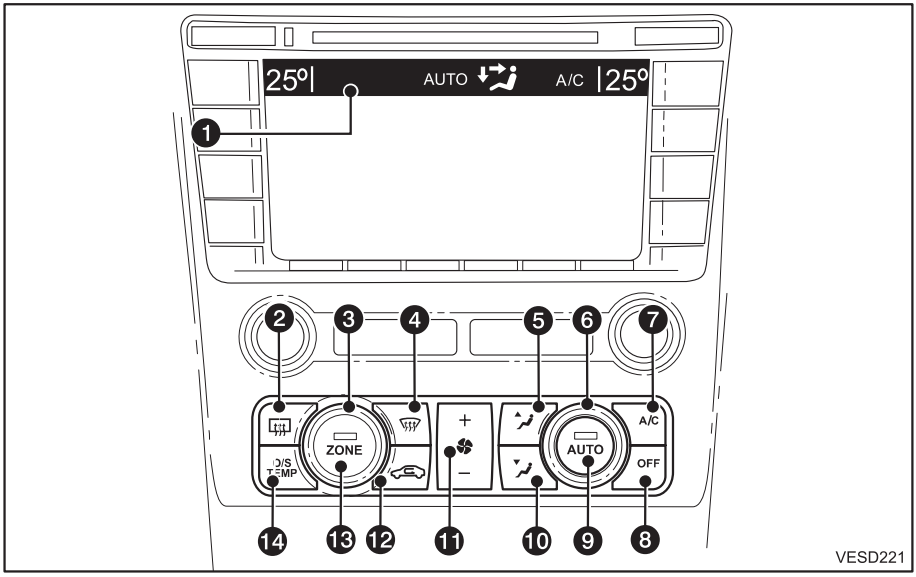
A passenger compartment air filter may be fitted to filter outside air entering the vehicle. The filter removes contaminants such as pollen and dust. This can be fitted at your request by your Holden Dealer.

CLIMATE CONTROL*

The climate control panel is located in the centre of the dashboard. It is designed to maintain the interior of the vehicle at the desired temperature.

The temperature for the driver's and passenger's side can be adjusted independently.

CONTROLS



1. Display
2. Rear window demister
3. Temperature control – left side
4. Windscreen demister
5. Mode up
6. Temperature control – right side
7. Air conditioning (**A/C**) button
8. **OFF** button
9. **AUTO** button
10. Mode down
11. Fan speed
12. Recirculation button
13. **ZONE** button
14. Outside air temperature display button

CLIMATE CONTROL cont.*

Temperature controls

Turn the temperature controls ❸ and ❻ clockwise (warmer) or anticlockwise (cooler). The temperature can be set between 17 °C and 30 °C (a setting between 22 °C and 24 °C is recommended).

The temperature settings for each side are shown in the display.

Note If turning the temperature control past 30 °C, the display will show **H** (hottest). Turning it past 17 °C, will show **C** (coolest).

ZONE button

Press the **ZONE** button ⓭ to set the climate control to single-zone (SZ) mode or dual-zone (DZ) mode. **SZ** or **DZ** appears in the display to show which mode is set.

Single-zone (SZ) mode

In single-zone operation, all zones are set to the same temperature. The temperature is shown in the display. Adjust it using the temperature control on the driver's side.

Dual-zone (DZ) mode

Dual-zone mode allows different temperatures to be set for the left and right sides or to link them.

To set a different temperature for the passenger's side, adjust the passenger's temperature control.

When linked, the passenger's side temperature setting mirrors whatever the driver's side temperature is set to. To link the passenger's side temperature, press and hold the **AUTO** button ❾ for at least three seconds.

Note Linking automatically occurs if the passenger's and driver's sides are set to the same temperature when the ignition is switched on.

Automatic operation

1. Start the engine.
2. Press the **AUTO** button ❾ if the **AUTO** icon is not already displayed.
3. Use the temperature controls to adjust the temperature. Try an initial setting between 22 °C and 24 °C.
4. Allow the system to stabilise for a few minutes.
5. Adjust the angle of the air vents to your personal requirements. For example, point the vents directly at your body or face for initial cooling and then point them away for a more general effect once you have cooled down.

Note

- The system must be on to make any adjustments.
- The setting does not change between the ignition being switched off or on (except if extreme hot or cold is selected). The setting only needs changing when wanting to alter the comfort level.

CLIMATE CONTROL cont.*

Fan

Press **+** or **-** on the fan button ⓫ to increase or decrease the fan speed.

The fan speed is shown in the display.

Note

- The climate control sets the fan speed automatically. When adjusting the fan speed, the system will revert to semi-automatic operation. The fan speed animation will appear in the display.
- When the engine is not running, the fan speed is limited to conserve the battery.
- To return to full automatic operation, press the **AUTO** button.

Mode buttons

Press the mode buttons ❺ or ⓾ to switch between the following positions:

Face mode directs air to both dashboard and console vents.

Bi-level mode directs approximately half of the air to both dashboard and console vents, then directs most of the remaining air to the floor outlets. Cooler air is directed to the upper outlets and warmer air to the floor outlets.

Floor mode directs most of the air to the floor outlets, with some air directed to the outer dashboard vents and a little air directed to the windscreen and side window demist outlets .

Floor and windscreen demist (blend) mode directs the air between the windscreen and floor outlets, with some air supplied to the outer dashboard vents and side window demist outlets.

The setting is shown in the display.

Note

- Manual selection of any mode will revert the system into semi-automatic operation.
- To return to full automatic operation, press the **AUTO** button.

AUTO button

Pressing the **AUTO** button ❾ switches the system to full automatic control.

AUTO appears in the display.

Note

- Adjusting any of the controls manually can impede the system in maintaining the set temperature. It is designed to operate with a minimum of manual adjustment. The **AUTO** icon on the display extinguishes when the system is not operating fully automatically.
- Allow the system to stabilise before changing comfort settings.

CLIMATE CONTROL* cont.

A/C button

Press the **A/C** button ❼ to switch the air conditioning on and off.

A/C appears in the display when the air conditioning is on. **A/C OFF** appears when it is off.

Note

- When or or is selected the air conditioning is automatically switched on.
- To conserve fuel, the air conditioning may be switched off in cold weather. The climate control maintains automatic control of all other functions but does not turn on the air conditioning, even if cabin temperature gets too high.
- When the air conditioning is switched on, it removes moisture and heat from the air.
- Air conditioning should be switched on for at least 5 to 10 minutes once every 2 weeks to lubricate the air conditioning seals, even in winter.
- The air conditioning cannot be turned off in demist mode. If the A/C button ❼ is pressed, the **A/C** symbol will flash 3 times and stay on.
- To protect the compressor, the engine may switch off the air conditioning during heavy acceleration, towing or when there is abnormal **A/C** system pressure.

Recirculation button

Press the button ⓬ to switch the air intake between recirculated air and outside air.

The symbol appears in the display.

Note

- Recirculation reuses interior air and is therefore not recommended for long periods of time.
- If recirculation mode is used for an extended period of time, the system will automatically let some fresh air into the cabin for ventilation.
- Do not use recirculation if occupants are smoking.
- Recirculation cannot be activated in demist mode. If the recirculation button ⓬ is pressed, the symbol will flash 3 times and stay off.

Pollution mode

The system can be set to pollution mode which selects recirculation when the vehicle speed is less than 15 km/h. This helps to prevent exhaust fumes entering the interior in heavy, stop/start traffic.

To switch pollution mode on or off, press and hold the button for four seconds.

When pollution mode is activated, the display shows **Pollution Mode Activated**. When it is switched off, the display shows **Pollution Mode Inactive**.

Windscreen demist button

The climate control cannot determine if the windscreen needs demisting.

Press the button ❹ to demist the windscreen and side windows. The system changes the outlets to demist and switches on the air conditioning.

The symbol appears in the display.

Press the button again to turn the demister off.

Note When is selected, the air conditioning is switched on automatically to optimise demisting performance. In this mode the air conditioning cannot be switched off and recirculation mode cannot be switched on.

CLIMATE CONTROL cont.*

Rear window demist button

Press the button ❷ to turn the rear demister on. Press the button again to turn the rear demister off.

The symbol appears in the display.

Note To avoid unnecessary electrical consumption, the rear demister switches off automatically.

O/S TEMP

Press the **O/S TEMP** button ⓮ to alternate the display between the temperature outside the vehicle and the normal display.

Pressing other buttons to adjust the climate control will also change the display from showing the outside temperature to showing the normal display.

Note Pressing **O/S TEMP** does not stop the system operating automatically.

OFF button

Press the OFF button ❽ to switch the system off.

Press any button to switch it back on.

Note When the system is off, recirculation and the rear window demister can still be switched on.

CLIMATE CONTROL* cont.

NOTES

What the system does

In automatic operation the system responds quickly to cooling and heating requirements. It is not necessary to set a cooler or hotter temperature than required to ensure fast cooling or heating.

The system should be left in automatic operation, so that it can:

- turn the air conditioning on and off,
- vary the temperature of the air entering the cabin,
- recirculate interior air or take air in from outside the vehicle,
- vary the fan speed,
- select the vents through which the air is delivered.

On a cold morning, the system will start in mode with the fan off. As the engine warms up, warm air is directed to the floor outlets. After that, the system changes to and the fan slows down.

The angle of the vents may need adjusting manually, at various times to direct cool air onto your body on hot days, or past your body on mild days.

Engine performance/fuel economy

The air conditioning uses power from the vehicle's engine. A small decrease in engine power and a slight increase in fuel consumption will be noticed when the air conditioning is in use. When driving at high speeds, the air conditioning compressor may switch off momentarily so that full engine power is available.

The system is protected by switches that guard against abnormal loads and loss of refrigerant. The air conditioning compressor may switch off until the fault is rectified. Have the system checked by a Holden Dealer if this occurs.

Adjusting the temperature

When the climate control system has stabilised and you wish to adjust the setting, it is recommended that the adjustment be made one degree at a time until the desired comfort level is reached. Comfort settings depend on clothing, acclimatisation and the angle at which you have directed the vents.

Quick cool down

To aid the climate control when first entering the vehicle on a hot day, open the windows to allow the hot air to escape. After a minute or two, close the windows to allow the system to work more effectively.

Ignition keys

Vehicles equipped with personal identity key* locking systems have the ability to remember individual adjustments for different keys. Refer to *Personal identity keys* in chapter 2.

When the button is pressed, the system identifies the key and sets the climate control to the last adjustments used for that key.

Automatic transmission*

If the vehicle is stopped for long periods in hot weather with the engine running and the air conditioning operating, select Neutral or Park with the transmission gear selector.

CLIMATE CONTROL cont.*

Hissing

Occasionally a slight hissing sound may be heard for a short time when the air conditioning switches off and pressure in the system equalises. This is normal.

Water

Water condensation forms when the air conditioning is operating, this condensation is discharged underneath the vehicle. Therefore, traces of clean, clear water on the ground underneath the vehicle are normal under these circumstances.

Unsealed roads (prevention of dust entry)

When following another vehicle on unsealed roads (and the dust is airborne), select recirculation. If the dust is not airborne select outside air (recirculation off) and set the fan to high speed. This builds up positive air pressure to help prevent dust entry. Ensure in both cases that all windows are closed.

Note Recirculation reuses interior air and is therefore not recommended for long periods of time.

Sensors

The climate control uses three different sensors to maintain the desired temperature.

- The vehicle's sunlight sensor monitors the solar radiation and uses the information to maintain the selected temperature when operating in the AUTO mode by initiating needed adjustments to the temperature, the fan speed and the air delivery system. The system may also supply cooler air to the side of the vehicle facing the sun. The recirculation mode will also be activated, as necessary. Do not cover the sunlight sensor. Refer to *Dashboard layout* previously in this chapter.
- The outside temperature sensor is located in front of the radiator and relies on air moving across the sensor. It can be affected by radiant heat when the vehicle is stationary.
- In order to prevent false temperature readings, the displayed temperature will not change until the following occurs:
  - Vehicle speed is above 16 km/h for 5 minutes.
  - Vehicle speed is above 40 km/h for 2.5 minutes.

  If the vehicle has been switched off for less than 3 hours, the temperature at start up will be recalled from previous operation.
- The in-car temperature sensor is located in the dashboard. Refer to *Dashboard layout* previously in this chapter. This measures the temperature inside the vehicle. The automatic climate control uses this sensor to receive information. It is important not to cover the sensor (for example, with stickers) to make sure it will function accurately.

CLIMATE CONTROL cont.*

Switching the climate control off

If the climate control is switched off:

- background noises may still be noticed coming from the system. It continues to operate to ensure that when the system is switched back on, it will be as close as possible to the temperature set before it was switched off.
- outside air is still selected. This may result in the interior becoming too hot or too cold. If this is the case, select recirculation.

Cigarette smoke

If occupants are smoking, it is recommended that the recirculate position not be used.

Note Recirculate mode reuses interior air and is therefore not recommended for long periods of time.

Regular running

It is important that once every 2 weeks, with the engine running, the air conditioning is switched on for 5 to 10 minutes (even in winter) to lubricate the air conditioning system seals.

Pollen/dust filter

A passenger compartment air filter may be fitted to filter outside air entering the vehicle. The filter removes contaminants such as pollen and dust. This can be fitted at your request by your Holden Dealer.

BLUETOOTH®✻

BLUETOOTH® CAR KIT

The Bluetooth® car kit allows you to answer incoming calls and make outgoing calls on your mobile phone without looking at or touching your mobile phone. Your Bluetooth® voice capable phone need only be inside the vehicle for it to connect to the Bluetooth® car kit.

Bluetooth® wireless technology

Bluetooth® devices communicate using radio waves. The Bluetooth® car kit is specifically designed for mobile phones that support Bluetooth® wireless technology. The Bluetooth® car kit can be used with devices that support the hands-free profile. 'Profile' in this instance means a set of Bluetooth® commands that your mobile phone uses for controlling your Bluetooth® car kit.

The Bluetooth® mobile phone and Bluetooth® car kit do not need to be in a line of sight. For example, your mobile phone may be in your bag while connected to the Bluetooth® car kit. The two devices need to be within a maximum of 10 metres of each other.

Mobile phone functionality

Mobile phones differ in their method of menu navigation. Furthermore, software releases of mobile phones with the same design can vary significantly. Therefore, please carefully read the operating guidelines of your mobile phone. Specifically take note of the functions relating to the topics 'Bluetooth®', 'hands-free' and 'headset mode'.

The capacity of your mobile phone's battery can quickly decrease when the Bluetooth® function is active. If you do not want to use the Bluetooth® function (i.e. when leaving your vehicle for an extended period) then deactivate this function on your mobile phone.

Note Some functions described in this section may not be available on your mobile phone.

Further information

Refer to your mobile phone's owner's manual, mobile phone retailer or mobile phone service provider for information that relates specifically to your mobile phone.

Definitions

Paired: The Bluetooth® module and the phone have stored each other's ID in memory and are available to be connected when within 10 metres of each other.

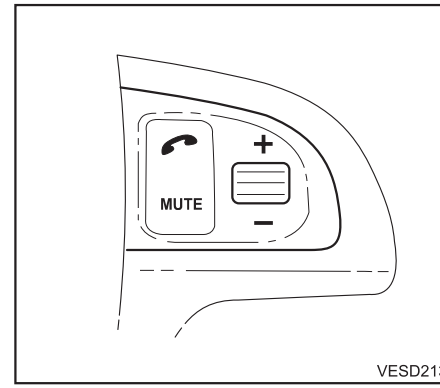
Connected: The mobile phone handset is currently linked with the Bluetooth® car kit. All functions on the Bluetooth® hands-free kit are active.

The *Bluetooth®* word mark and logo are registered trademarks and are owned by the Bluetooth SIG, Inc.

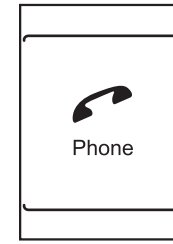
BLUETOOTH®✻cont.

Bluetooth® button

The Bluetooth® button is located on the right-hand spoke of the steering wheel.

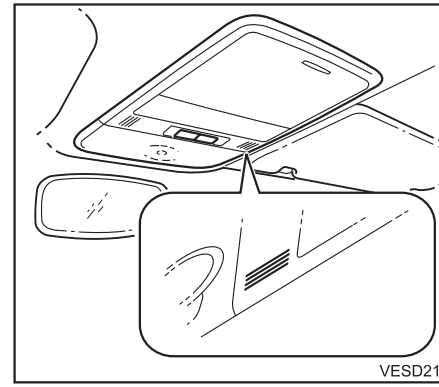


Note When pressing the button with the ignition on, a phone symbol appears in the instrument panel centre display for a few seconds.



Microphone

The microphone is located on the right hand side of the overhead console between the sun visors.



BLUETOOTH®✻cont.

Pairing your mobile phone

The pairing between the Bluetooth® capable mobile phone and the Bluetooth® car kit can be established as follows:

1. Switch on your mobile phone.
2. Switch on the ignition.
3. Perform the following steps on your mobile phone:
   a. Enter the Bluetooth® menu.
   b. Activate the Bluetooth® function.
   c. Press the ☎ button on the steering wheel. This will make the vehicle's Bluetooth® system discoverable.
   d. Search for Bluetooth® devices.
   e. Select the device labelled 'Vehicle BT VXX' (VXX is the Bluetooth® module's firmware version number).
   f. Enter the following PIN: 1234. This establishes the connection between your mobile phone and the Bluetooth® car kit.
   g. Set the mobile phone to accept Bluetooth® connection requests automatically without your permission.

If it is not possible to establish a connection, refer to *Troubleshooting* further on in this section.

Note If using a BlackBerry®/PDA phone device, the pairing action may take several seconds longer to complete. Do not interrupt during this process or the pairing will not be successful.

Pairing multiple mobile phones

The Bluetooth® car kit can be paired with up to six mobile phones, but can only be connected to one mobile phone at a time.

When the ignition is switched on, the Bluetooth® car kit searches for the most recently paired mobile phone(s) for 90 seconds. If a recently paired phone cannot be found, the system becomes discoverable to new phones.

Connecting your mobile phone (after initial pairing)

To connect your mobile phone to the Bluetooth® car kit:

1. Move your mobile phone to within 10 metres of the Bluetooth® car kit, preferably inside the vehicle.
2. Ensure that your mobile phone is switched on and the Bluetooth® function on your mobile phone is enabled.
3. Switch on the ignition.
4. Some mobile phones may require pressing the ☎ button on the steering wheel.
5. The audio system may momentarily display **voice in** to show the Bluetooth® system has connected to the phone.

Making a call by dialling on your mobile phone handset

When the Bluetooth® car kit is connected to your mobile phone, calls can be made with your mobile phone handset normally. Dial the number on your mobile phone handset.

WARNING

It is recommended that the driver does not use this method when the vehicle is moving.

BLUETOOTH®✻cont.

Making a call by voice dialling (voice tags)

To use the voice dial functions of your mobile phone (provided that your mobile phone is capable), entries for dialling phone numbers with voice dialling have to be prerecorded. These voice commands can then be called via the Bluetooth® car kit with the active Bluetooth® connection. To configure voice dialling on your mobile phone, refer to the mobile phone's owner's manual.

To voice dial:

1. Ensure that there is no call in progress.
2. Press the ✆ button once. A tone will be heard indicating readiness to accept a voice input.
3. Speak the name of the person you wish to call, i.e. the voice tag for that phone number recorded on the mobile phone.
4. The Bluetooth® car kit plays back the voice tag and dials the corresponding phone number.

Answering a call

To answer an incoming call, press the ✆ button once.

WARNING

The call can also be answered using your mobile phone. It is recommended that the driver does not use this method of answering a call when the vehicle is moving.

Automatic answer

If the automatic answer function on your mobile phone is set on, the mobile phone automatically answers the incoming call after one ring.

Rejecting a call

If you do not want to answer a call, press and hold the ✆ button until the ring tone stops.

Placing a call on hold

To place a call on hold and answer a second call, press the ✆ button twice in quick succession.

Press the ✆ button twice in quick succession to switch between the first and second calls or to resume an on hold call.

Ending a call

Press the ✆ button once.

Redialling the last number

To redial the last number dialled:

1. Ensure that there is no call in progress.
2. Press the ✆ button twice.

BLUETOOTH®✻cont.

Private/hands-free

WARNING

Only activate this function if the vehicle is parked.

To switch from hands-free to the mobile phone handset:

1. Press and hold the ✆ button for three seconds.
2. Continue the call on the mobile phone handset.

Press the ✆ button to return to the hands-free function.

Cancelling the Bluetooth® connection

To cancel the Bluetooth® connection, perform any of the following:

- Move your mobile phone outside of the reception range of the Bluetooth® car kit (approximately 10 metres).
- Switch off the ignition and open a door.
- Switch off the mobile phone.
- If no call is in progress, press and hold the ✆ button for three seconds.

Vehicle audio system

The vehicle's audio system volume is automatically set to silent when making or receiving a call. The voice of the caller is heard through the audio system speakers and **VOICE IN** is shown on the audio system display.

As required, the audio system's volume may be adjusted to compensate for variations in the mobile phone signal quality or changes in the background noise within the vehicle.

BLUETOOTH®✻cont.

Troubleshooting

Problem	Cause and solution
Mobile phone will not pair up with the Bluetooth® car kit	• Ignition is switched off. Switch on the ignition. • Bluetooth® is not enabled on the phone. • Already connected to another paired mobile phone Switch off other paired mobile phone(s) in the vehicle. • The mobile phone is not supported. Refer to your Holden Dealer.
Mobile phone will not connect to the Bluetooth® car kit	• Ignition is switched off. Switch on the ignition. • Mobile phone is not paired to the Bluetooth® phone kit. Follow the instructions to pair the mobile phone to the Bluetooth® car kit. • Automatic connection not set on mobile phone. Follow your mobile phone's owner's manual to ensure that authorised connection is enabled for the Bluetooth® car kit.
Voice dialling does not work	• Mobile phone voice dialling is not available on your mobile phone. Refer to your mobile phone's owner's manual. • No voice tags saved to your mobile phone. Refer to your mobile phone's owner's manual. • The background noise is too high. • The voice tag was recorded directly onto the mobile phone. The phone does not now recognise the voice tag when spoken via Bluetooth®. If your mobile phone is capable, record the voice tags in the vehicle via the Bluetooth® car kit. • Mobile phone is not fully compatible with Bluetooth® car kit. Refer to your Holden Dealer.
Redial does not work	• Your mobile phone has no last redialled numbers. Make the initial call from the mobile phone handset. • This feature is not compatible on your mobile phone and the Bluetooth® car kit. Refer to your Holden Dealer.
An echo is present	• Audio system volume is too loud. Turn down the volume on the audio system during the call.

CHAPTER 1B

Audio

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Steering wheel remote controls (all units) 1B-2

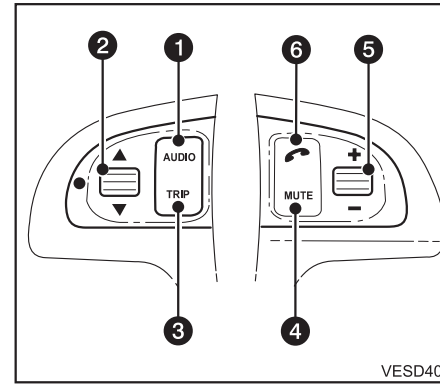
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*The asterisk signifies equipment options not in all vehicles, model variants, engine options, optional equipment and Genuine Holden Accessories (and Parts).

STEERING WHEEL REMOTE CONTROLS (ALL UNITS)



❶ AUDIO Button

Select source: FM1 → FM2 → AM → CD → Front AUX → Rear AUX → FM1 → FM2 → AM → ...

Note

- The front AUX source is only selectable when an AUX device is plugged in.
- CD is only selectable when a CD is loaded.
- When ASM (Automatic Station Memory) is active, then only ASM Radio bands are selected.
- Rear AUX available only if enabled in menu and a source is available.

❷ Scroll wheel:

Note When some trip functions are active the scroll wheel does not operate the audio system.

Radio Mode: Select next/previous station by turning the scroll wheel up/down.

CD Mode: Select next/previous track by turning the scroll wheel up/down.

Push scroll wheel: select next disc in changer (6 CD only).

❸ Change display on instrument panel.

❹ • Mute button*.

Toggle between mute/de-mute of active source.

• NAV button*

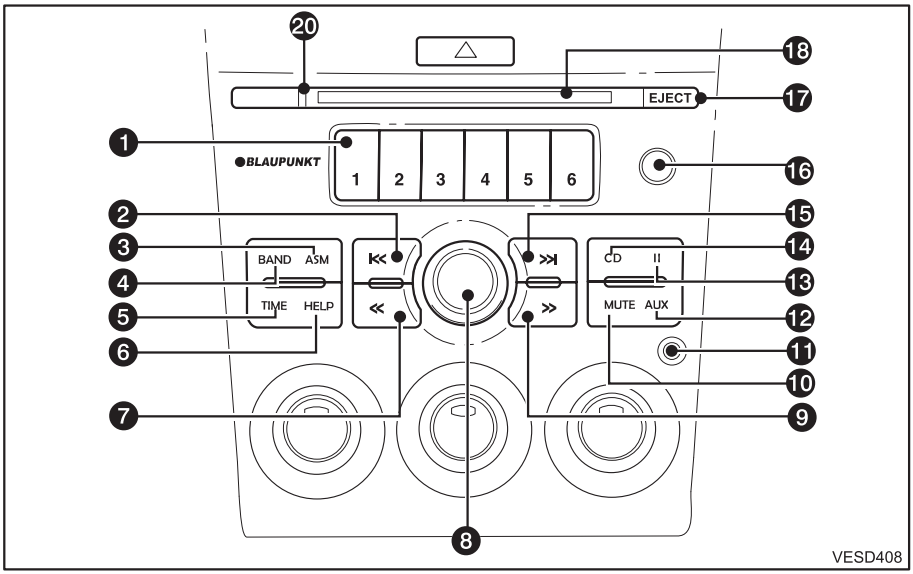
Refer to the Navigation system handbook.

❺ Volume s*croll wheel:* Increase/decrease volume by turning the scroll wheel up/down.

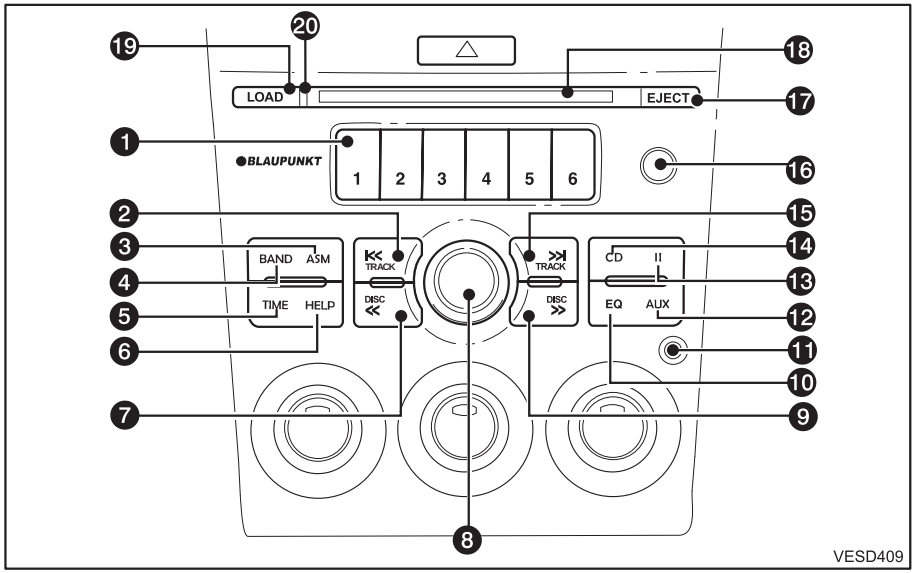
❻ Bluetooth button®* to activate phone call in.

OVERVIEW (LEVEL 1)

OMEGA, SV6 (LEVEL 1 – SINGLE CD)



SS (LEVEL 1 – 6 CD CHANGER) (OPTIONAL OMEGA, SV6)



OVERVIEW cont.

❶ Radio preset buttons 1-6.
❷ Radio Mode: Station seek (down).
CD Mode short press: Previous Track.
❸ Automatic Station Memory storage ASM.
❹ Radio band button.
Radio mode: toggle between FM 1, FM2 and AM band (if ASM is not active).
❺ Short press: Recall clock/calendar information display.
Long press: Enter clock/calendar adjustment mode.
❻ Enter Infotainment Help menu.
❼ Radio Mode: Manual frequency select (down).
CD Changer Mode: Select previous disc (only for Level 1 with 6 CD).
CD Mode long press: rewind (audible).
❽ Volume control (push and turn action).
Push the volume control to enter the options menu.
Turn the volume control to select menu items.
Push the volume control to enter menu items.
❾ Radio Mode: Manual frequency select (up).
CD Changer Mode: Select next disc (only for Level 1 with 6 CD).
CD Mode long press: cue (audible).
❿ – Mute volume (single CD - Omega and SV6).
– EQ equalizer (6 CD changer - SS).
⓫ Socket for front AUX source.
⓬ AUX source button – toggle between front AUX and rear DVD player*.
⓭ CD pause button.
⓮ CD source button.
⓯ Radio Mode: Station seek (up).
CD Mode short press: Next Track.
⓰ On/off button.
⓱ CD eject button.
CD Changer Long press: To eject all disc.
CD Changer Single press: To eject one disc.
⓲ CD load/remove slot.
⓳ CD load button.
CD Changer Long press: To Load all discs.
CD Changer Single press: To Load one disc.
⓴ CD load indicator light.

IMPORTANT INFORMATION (LEVEL 1)

NOTES ON RADIO OPERATION (ALL UNITS)

- Do not apply any cleaning solution or solvents, or other forms of liquid, to the audio system as this may cause damage to the display and/or electronics, and void the warranty.
- Do not insert anything other than CDs into the CD slot (no foreign objects) as this could cause damage to the CD mechanism. If foreign objects are found in the audio system then warranty will be void.
- Do not insert CDs that have labels attached. Labels can come off and damage the CD mechanism.
- Excessively scratched or dirty CDs may not play correctly.
- Under direct sunlight the audio system display may become difficult to read.

SECURITY CODE (ALL UNITS)

Your audio system includes an electronically coded security system.

This electronically links the audio system to your vehicle. Under normal circumstances you will be unaware of its operation and shouldn't need to take any action to enable the audio system to work, even if the vehicle's battery has been disconnected and reconnected.

When the electronic link between the vehicle and the audio system is interrupted, the display 'Security Lockout Active' will be shown. In this case, please contact your Holden Dealer.

Security Indicator Light

Note For added security a small red light ⓴ on the audio system blinks while the ignition is off.

INFORMATION DISPLAY (LEVEL 1)

All of the relevant information for radio and CD can be found on the vehicle's Information Display located on the dashboard.

The calendar can be temporarily displayed by pressing the **TIME** button ❺.

SETTING THE CLOCK & CALENDAR (LEVEL 1)

Note The clock and calendar can be adjusted when the audio system is either on or off.

Adjust the clock and calendar as follows:

1. Press and hold the **TIME** button ❺ for more than 2 seconds. The display will show the Set Clock screen. The hours are flashing.
2. Adjust the hours by turning the Volume Control Dial ❽.
3. To adjust the minutes, first press the Volume Control Dial ❽. The minutes are flashing.
4. Adjust the minutes by turning the Volume Control Dial ❽.
5. Repeat this procedure for the date, month and year.
6. To exit this mode, press the **TIME** button ❺ once more.

Note The audio system will automatically exit this mode if no adjustments are made for 8 seconds.

SWITCHING ON/OFF (LEVEL 1)

ON/OFF button

Switch the audio system on and off by pressing the ⏻ button ⓰.

On/Off (Using ignition key)

The audio system can operate when the ignition key is turned to the Accessories position. When the vehicle's Accessories Control is turned off by turning the ignition key off (and opening the driver's door) the audio system (if operating) will be switched off.

When the key is switched to the Accessories position again, the audio system will also be switched on.

On/Off (Without ignition key)

The audio system can also be switched on and off without using the vehicle's ignition key by pressing the ⏻ button ⓰. The audio system will operate for approximately 1 hour. Once this period has elapsed, the audio system switches off automatically and will not operate until the ⏻ button ⓰ is pressed again, or the ignition key is again in the Accessories or Ignition position.

On/Off when Accessories or Ignition is on

When the ignition key is in the Accessories or Ignition position the audio system can be turned on (if off) with the following buttons:

- ⏻ button ⓰.
- **CD** button ⓮.
- **BAND** button ❹.
- **AUX** button ⓬.

AUDIO SETTINGS (LEVEL 1)

SOURCE (MODE) SELECTION

The radio mode can be selected by any of the following actions:

- Pressing the ⏻ button ⓰ if the previously played source was radio.
- Pressing the **BAND** button ❹.
- Pressing the **ASM** button ❸.

The CD mode can be selected by any of the following actions:

- Pressing the ⏻ button ⓰ if the previously played source was CD.
- Pressing the **CD** button ⓮.

The AUX mode can be selected by any of the following actions:

- Pressing the ⏻ button ⓰ if the previously played source was AUX and an AUX source is still plugged in.
- Pressing the **AUX** button ⓬.

AUDIO SETTINGS (LEVEL 1) cont.

Volume

Turning the Volume Control Dial ❽ clockwise will increase the volume, turning it anti-clockwise will decrease the volume.

Independent Tone Memories*

This audio system is equipped with Independent Tone Memories.

The audio settings can be set independently for each listening mode such as AM, FM and CD.

After all individually preferred tone settings have been stored using one particular ignition key, the same procedure can be repeated with different settings for the other ignition key*.

Boost *(6 CD CHANGER)*

1. Access the Option menu by pressing the Volume Control Dial ❽ when the audio system is switched on.
   The menu item 'AUDIO' is highlighted.
2. Press the Volume Control Dial ❽ to access the audio menu.
   The menu item 'Boost' is highlighted.
3. Press the Volume Control Dial ❽ to access the boost setting.
4. Turn the Volume Control Dial ❽ clockwise or anti-clockwise to alter the boost setting. Boost can be changed from -2 to +2 through 0 in step size of 1.
5. Press the Volume Control Dial ❽ to exit and store the setting.
6. To exit the menu, select the 'BACK' option or wait 8 seconds.

Bass (single CD)

1. Access the Option menu by pressing the Volume Control Dial ❽ when the audio system is switched on.
   The menu item 'AUDIO' is highlighted.
2. Press the Volume Control Dial ❽ to access the audio menu.
   The menu item 'BASS' is highlighted.
3. Press the Volume Control Dial ❽ to access the bass setting.
4. Turn the Volume Control Dial ❽ clockwise or anti-clockwise to alter the bass setting. Bass can be changed from -6 to +6 through 0 in step size of 1.
5. Press the Volume Control Dial ❽ to exit and store the setting.
6. To exit the menu, select the 'BACK' option or wait 8 seconds.

Treble (Single CD)

1. Access the Option menu by pressing the Volume Control Dial ❽ when the audio system is switched on.
   The menu item 'AUDIO' is highlighted.
2. Press the Volume Control Dial ❽ to access the audio menu.
3. Turn the Volume Control Dial ❽ clockwise to highlight 'TREBLE'.
4. Press the Volume Control Dial ❽ to access the treble setting.
5. Turn the Volume Control Dial ❽ clockwise or anti-clockwise to alter the treble setting. Treble can be changed from -6 to +6 through 0 in step size of 1.
6. Press the Volume Control Dial ❽ to exit and store the setting.
7. To exit the menu, the 'BACK' option or wait 8 seconds.

AUDIO SETTINGS (LEVEL 1) cont.

Fader

To shift the sound towards the rear or front:

1. Enter the Option menu by pressing the Volume Control Dial ❽ when the audio system is switched on.
   The menu item 'AUDIO' is highlighted.
2. Press the Volume Control Dial ❽ to access the audio menu.
3. Turn the Volume Control Dial ❽ clockwise to highlight 'FADER'.
4. Press the Volume Control Dial ❽ to access the fader setting.
5. Turn the Volume Control Dial ❽ clockwise or anti-clockwise to alter the fader setting. Fader can be changed from F6 (front) to R6 (rear) through 0 in step size of 1.
6. Press the Volume Control Dial ❽ to exit and store the setting.
7. To exit the menu, select the 'BACK' option or wait 8 seconds.

Balance

To shift the sound towards the right or the left:

1. Enter the Option menu by pressing the Volume Control Dial ❽ when the audio system is switched on.
   The menu item 'AUDIO' is highlighted.
2. Press the Volume Control Dial ❽ to access the audio menu.
3. Turn the Volume Control Dial ❽ clockwise to highlight 'BALANCE'.
4. Press the Volume Control Dial ❽ to access the balance setting.
5. Turn the Volume Control Dial ❽ clockwise or anti-clockwise to alter the balance setting. Balance can be changed from L6 (left) to R6 (right) through 0 in step size of 1.
6. Press the Volume Control Dial ❽ to exit and store the setting.
7. To exit the menu, select the 'BACK' option or wait 8 seconds.

EQ EQUALIZER FUNCTION (6 CD CHANGER)

The audio system is equipped with five pre-programmed equalizer curves. Each of these curves have been factory-programmed to enhance a particular style of music. However it may be used with any type. To turn this function on or off, or to scroll through the five EQ curves, press the **EQ** button ❿ one or more times. The five pre-programmed settings are:

• Rock. • Pop. • Jazz. • Classic. • Vocal. • and off.

Equalizer Off

The equalizer function can be turned off by pressing the **EQ** button ❿ one or more times until 'EQ Off' appears on the display. It can also be turned off by pressing and holding the **EQ** button ❿ for more than two seconds.

LOUDNESS CONTOUR CIRCUIT

This audio system is equipped with an automatic loudness contour circuit, to enhance the Bass and Treble response at low volume levels.

MUTE

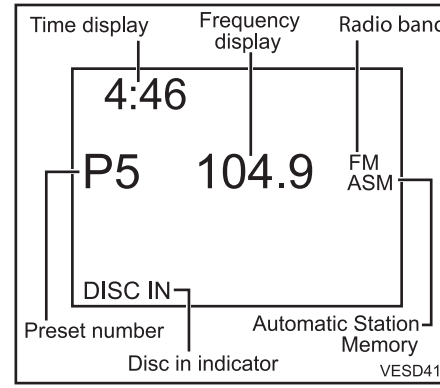
The MUTE button ❿ (single CD - Omega and SV6) instantly reduces the volume of the audio system by a large amount (20 decibels). While the volume is muted, 'MUTED' is shown on the display.

Note Refer to *Steering wheel remote controls* previously in this chapter for operation of the MUTE button on the steering wheel.

Mute can be cancelled by pressing the button again, by increasing the volume using the Volume Control Dial ❽, or by turning the audio system off and on.

RADIO OPERATION (LEVEL 1)

RADIO DISPLAY



Selecting a Radio Band

Press the BAND button ❹ repeatedly to select one AM and two FM bands (FM1 & FM2). The chosen band will be shown on the display. If the ASM mode is active ('ASM' appears on the display).

For further information on the ASM mode, see the *Automatic Station Memory* further on in this chapter.

Manual Tuning

- Press the ≫ button ❾ or the ≪ button ❼ to tune the frequency band up or down. The frequency changes in steps of 9 kHz for AM and 0.1 MHz for FM.

Automatic Seek Tuning

This function seeks radio stations automatically.

1. Press the ≫| button ⓯ to select the next higher frequency radio station automatically.
2. Press the |≪ button ❷ to select the next lower frequency radio station automatically.

Auto/Local/Distance selection ('Seek Sens' in the menu)

The LOCAL function reduces the radio's seek tuning sensitivity in AM and FM modes. This will cause the SEEK tuning to stop only on stations with strong signals i.e. city area.

If you are performing a SEEK function in an area where few or no stations can be found when LOCAL ('LO') is active, you can choose DISTANCE ('DX') so that weaker i.e. country area stations may also be found.

You can also choose the AUTO option. With AUTO selected, the radio first searches for local stations and, if no stations can be found, the radio searches for all stations.

Note

- If local stations are found using auto mode, the radio will not search for distance stations.
- It is advisable to set the seek sensitivity to distance (DX) mode, so that all stations are found. Unless you are trying to avoid weaker stations.

RADIO OPERATION (LEVEL 1) cont.

The Local/Distance selection has no effect when the ASM search feature is being used.

1. Access the Option Menu by pressing the Volume Control Dial ❽ when the radio source is selected.
2. Highlight the menu item 'SEEK SENS' by turning the Volume Control Dial ❽ clockwise.
3. Press the Volume Control Dial ❽ to access the seek sensitivity setting.
4. Turn the Volume Control Dial ❽ clockwise or anti-clockwise to choose one of the settings 'LO' (local), 'DX' (distance) or 'AUTO'.
5. Press the Volume Control Dial ❽ to exit and store the seek sensitivity setting.
6. To exit the Menu, select the 'EXIT 'option or wait 8 seconds.

Storing Stations

The radio is equipped with 30 stations presets.

- 6 x FM1
- 6 x FM2
- 6 x AM
- 6 x FM ASM (Automatic Station Memory FM Stations)
- 6 x AM ASM (Automatic Station Memory AM Stations)

Storing a Radio Station into a Preset

1. Select the desired radio band, AM, FM1 or FM2 using the **BAND** ❹ button.
2. Tune to the desired station by means of:
   - Automatic seek tuning or
   - Manual tuning.
3. Press and hold the desired preset button **1** to **6** ❶ until the selected preset number is displayed. A beep sounds, indicating that the chosen radio station has been stored into the preset. The previously stored station is replaced. The selected preset number '1' to '6' appears on the display.
4. Store the other preset buttons in the same way.
5. Repeat the same procedure for the other radio bands AM, FM1 and FM2.

Recalling Stored Stations

Select a radio band, AM or FM.

1. Briefly press the desired preset button **1** to **6** ❶.

To select one of the stations stored with Automatic Station Memory:

1. Select the AM or FM radio band.
2. Press the **ASM** button ❸.
3. Now press the desired preset button **1** to **6** ❶.

RADIO OPERATION (LEVEL 1) cont.

Automatic Station Memory (ASM) ❸

This feature allows the storage of an additional 6 AM and 6 FM radio stations. It is of great benefit when travelling long distances, e.g. on holidays, since you can store the strongest radio stations without knowing their frequency. This function does not delete the stations already stored on FM1, FM2 or AM.

Using Automatic Station Memory

1. Select the desired radio band AM or FM with the **BAND** ❹ button.
2. Press the **ASM** button ❸ for at least two seconds until a beep sounds. Search tuning starts and 'SEARCH', followed by the number of found stations, appears on the display.

After the ASM process is finished, the six strongest stations found in the area are stored. The radio will play the station stored on preset **1**.

If you have travelled beyond the range of the stored stations, you may wish to repeat the process again to store new stronger stations.

To alternate between the ASM radio stations and your normally stored radio stations (on FM1, FM2 or AM):

- Briefly press the **ASM** button ❸.

Whenever you are using the AM ASM or the FM ASM bands, 'ASM' will also be shown on the display.

You can also store stations manually in the ASM station presets (see 'Storing a Radio Station into a Preset').

ANTENNA INFORMATION

Refer to *Antenna Information* further on in this chapter.

RADIO RECEPTION

Due to varying reception locations, car radios have performance limitations that may occasionally create the impression that your radio is malfunctioning. To assist you in understanding what can be expected from your radio, we have set out below how reception may vary from time to time and under certain conditions.

AM and FM

There are two types of radio broadcasting frequencies, AM (Amplitude Modulation) in which the amplitude of the signal is varied to produce the sound and FM (Frequency Modulation) in which the frequency is varied to produce the sound.

Range

AM broadcasts tend to follow the earth's curvature and also reflect from the upper atmosphere, which enables long range reception, especially after sunset.

FM transmissions are basically line-of-sight (similar to TV signals) and are reflected by buildings, mountains etc., but not by the upper atmosphere.

RADIO OPERATION (LEVEL 1) cont.

Interference

Interference is caused by either natural or man made electrical disturbances. This can affect the amplitude of the reception signal. AM signals are more prone to this type of interference than FM signals. This type of interference has little or no effect on the frequency of the reception signal, thus AM is susceptible to interference from power lines, fluorescent lighting, neon signs, traffic light control circuits, overhead tram wires and electrical storms. With FM reception, these amplitude variations are filtered out, leaving a relatively clear signal, (refer to 'Peculiarities of FM Mobile Reception') which is one of the major advantages of FM broadcasts.

Dual fuel vehicles (LPG)*

Vehicles fitted with dual fuel systems may experience reduced reception at times.

Peculiarities of FM Mobile Reception

A mobile FM receiver cannot be expected to continuously provide the quality of FM reception you may have experienced with your home receiver. Contrary to popular opinion, FM broadcasts are not static free, and although your radio has a built-in electronic interference absorption circuit, some static will occur from time to time, especially in areas without a direct line of sight to the transmitter.

There are two phenomena that are characteristic of FM reception:

- **Flutter** – When FM signals are reflected by solid objects, they can pass through areas of 'shadow' caused by tall buildings and/or hilly terrain, which effectively blocks out the signal. As the vehicle passes in and out of shadow areas, the signal level will vary at a rapid rate, creating a flutter type of interference to the signal.
- **Distortion (Multipath)** – Distortion may occur when the direct signal from the transmitter and a reflected signal reach the antenna at the same time and either cancel or support each other, like ghosting on a TV. This results in intermittent distortion of the signal while moving or in constant distortion when stationary, e.g. at a traffic light or when parking. Should this distortion occur while stationary, moving the vehicle approximately 1 or 2 metres usually corrects the problem.

To reduce the effects of interference and/or poor signal strength, several features have been included within the radio which work automatically when needed:

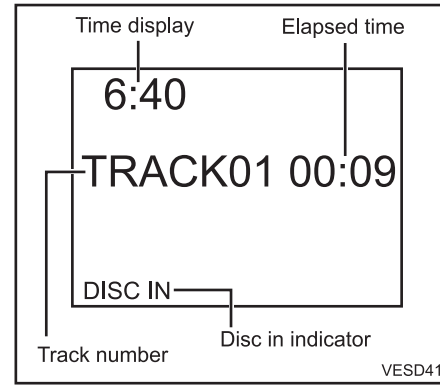
- **Noise Blanking Circuit** (FM interference suppression) – This radio has been equipped with a Noise Blanking Circuit to reduce pulse interference.
- **Soft Muting Circuit** – The built-in Soft Muting Circuit will reduce the FM stereo separation and treble response if the signal from the radio station deteriorates. This effect lessens the amount of audible hiss and background noises that are usually heard with weaker FM signals.
- **Multipath Detection Circuit** – If repeated multipath signals are received, the circuitry will switch the radio into MONO mode and slightly reduce the treble response. It will gradually return to STEREO with full treble response when the multipath conditions fade.

SINGLE CD OPERATION (LEVEL 1)

The CD drive is built into the audio system and CDs are loaded through the CD slot ⓲ on the front face of the audio system.

Note The CD drive is designed for standard 12 cm CDs only. Using incorrect sized CDs (e.g. 8 cm or 3 inch CDs) may damage the drive or disc, even if an adapter is used.

CD Display Track Info Mode



Loading a CD

To load a CD into the CD Changer, insert the CD with the label surface facing upwards into the CD slot ⓲ until the mechanism pulls the CD inside and it begins to play.

Ejecting a CD

Briefly press the **EJECT** button ⓱.

Note If an ejected CD is not removed within 10 seconds, it will be automatically reloaded to protect it from accidental damage.

Playing CDs

- Press the ⏻ button ⓰ if the previous mode was CD.
- Press the **CD** button ⓮ if the vehicle's accessories or ignition is on.

Stopping a CD

- Press the **BAND** button ❹ to stop CD playback and resume in radio mode, or press the ⏻ button ⓰.

Pausing a CD

- Press the ▮▮ (Pause) button ⓭ to pause the CD playback.
  'PAUSED' will be shown on the display. Press it again to continue playing the CD.

CD Endless Playback

When the player reaches the end of a CD, it automatically returns to the start and plays the CD again.

Track Selection

1. Press the ⏭ button ⓯ to go on to the next track of the current CD, or press the button repeatedly until the desired track is reached.
2. Press the ⏮ button ❷ to go back to the start of the current track, or press the button repeatedly until the desired track is reached.

SINGLE CD OPERATION (LEVEL 1) cont.

Fast Forward/Fast Back (Track Cue/Review)

1. Press and hold the ≫ button ❾ or the ≪ button ❼ to rapidly move forwards or backwards within the current track.

CD Random

When this feature is selected, all tracks on the current CD will be played in random order.

1. Press the preset button ❶ **RANDOM** to randomly play all tracks on the CD.

To cancel this function:

2. Press the preset button ❶ **RANDOM** again.

If the buttons ≫| ⓯ or |≪ ❷ are pressed while in random play mode, the next random selection will be made immediately.

Track Repeat

1. Press the preset button ❶ **REPEAT** to replay the current track continuously.

Press it again to cancel Track Repeat.

Changing CD Mode Display

You can choose preferred display modes for CD operation:

- Press the preset button ❶ **DISPLAY MODE** repeatedly until the desired display mode is shown.
- Basic mode with track number and clock display.
- Normal mode with track number, playtime and clock display.
- Track info mode with track number and track name.

Note CD Text can only be shown when the appropriate data is stored on the CD. If no data is present, 'No Text' is displayed.

CD Player Memory

Under severe vibration, the CD laser may not be able to maintain the extremely precise focus needed to read the tiny pits on the surface of the CD. When the laser focus is temporarily lost, the data that are read from the CD will also be temporarily interrupted. Your CD Player is therefore fitted with a memory buffer that holds approximately seven seconds of music which is used to prevent interruption over severely bumpy surfaces. Should the severe vibration last for longer than seven seconds, the memory buffer may become empty and playback will be interrupted or stopped until the mechanism has time to refocus, read the disc and refill the memory buffer. This situation should very rarely occur under normal driving conditions.

Playing recordable CDs (CD-Rs or CD-RWs)

It is possible to play CD-Rs on this audio system, however, depending on the type/condition of the recording equipment and the blank disc used, some CD-Rs may not play consistently or at all. CD-RWs (rewritable CDs) are not compatible with this audio system and will not play. Some copy controlled CDs may not play consistently or not at all.

6 CD CHANGER OPERATION (LEVEL 1)

6 CD Changer Operation

The CD Changer holds up to six CDs at one time. The Changer is built into the audio system and CDs are loaded through the single slot ⓲ on the front face of the audio system, after pressing the **LOAD** button ⓳ (refer to 'Loading a CD' on the next page).

Note The CD Changer is designed for standard 12 cm CDs only. Using incorrect sized CDs (e.g. 8 cm or 3 inch CDs) may damage the Changer or the disc, even if an adapter is used.

CD Display

For CD changer operation you can choose between different CD displays.

To choose one of the display modes,

- Press the preset button ❶ **DISPLAY MODE** repeatedly until the desired display mode is shown.

For CD operation, the following modes are available:

- Basic mode with track number and clock display.
- Normal mode with track number and playtime.
- Track info mode with track number, and track name. Track name can only be displayed when the appropriate data is stored on the CD (CD text).
- Disc info mode with track number, and name of CD. The CD name can only be displayed when the appropriate data is stored on the CD (CD text).
- Track information display mode is unavailable if a track without information is played.
- Track information mode is cancelled if a track without information is played.

For MP3-CD operation the following modes are available:

- Normal mode with track number and clock display.
- Track info mode with track number and playtime.
- Song info mode with song title and track number.
- Folder info mode with folder number and folder name. Folder name can only be displayed when the appropriate data is stored on the CD (MP3 ID-tag).
- Artist info mode with track number and artist name. Artist name can only be displayed when the appropriate data is stored on the CD (MP3 ID-tag).
- Album info mode with track number, and album title.

Note There are limitations on the number of sub-directories that can be read. Not all MP3 CDs are compatible.

Scroll text

When the title displayed is to long for the infotainment screen the missing text can be viewed .

Press the preset button ❶ **SCROLL TEXT** repeatedly to see the start or finish of the title.

CD Display Symbols

The display shows DISC and six numbers that represent the six CD storage locations within the CD Changer. When a storage location within the CD Changer has no disc loaded, '–' is displayed. When a CD is loaded into the Changer the number of the CD is displayed to show that there is a CD loaded in that storage location. When a CD is playing, its number is highlighted on the screen.

6 CD CHANGER OPERATION (LEVEL 1) cont.

Loading a CD

To load a CD into the CD Changer, briefly press the **LOAD** button ⓳. When the Changer is ready to accept the CD, 'Insert Disc' will be displayed.

The Load Indicator Light ⓴ will flash green, and the audio system will beep twice. Insert the CD with the label surface facing upwards, into the CD slot ⓲ until the mechanism pulls the CD inside and it begins to play.

The LOAD function can be cancelled by briefly pressing the **EJECT** button ⓱, turning the audio system OFF, or it will cancel automatically if no disc has been inserted within 10 seconds after the 'Insert Disc' message is displayed.

Loading all CDs

A function has been included to allow the loading of up to six CDs without having to repeatedly press the **LOAD** button.

To start the 'Loading All Discs' function, push and hold the **LOAD** button ⓳ for more than 2 seconds until a beep sounds and the display shows 'Loading All Discs'. The display, beeps and Load Indicator Light ⓴ will prompt you when it is time to insert each CD.

This function is cancelled automatically when no CD has been inserted for 10 seconds, by briefly pressing the **EJECT** button ⓱, or by turning the audio system OFF.

Note It is possible to insert and load CDs while the vehicle's ignition key is turned off. The audio system will turn off after loading the CDs.

Ejecting a CD

To remove the currently selected CD, briefly press the **EJECT** button ⓱. When the CD is ready for removal from the CD slot ⓲, 'Remove Disc' will be displayed. The Eject Indicator Light ⓴ will flash and the audio system will beep twice.

If you wish to eject a CD that is not currently playing, briefly press the **EJECT** button ⓱ followed by the button **1** - **6** ❶ that represents the CD you wish to eject within 3 seconds.

The **EJECT** function can be cancelled by briefly pressing the **LOAD** button ⓳ or by turning the audio system OFF.

Note If an ejected CD is not removed within 10 seconds, it will be automatically reloaded to protect it from accidental damage.

Ejecting all CDs

All CDs within the CD Changer can be ejected by pushing and holding the **EJECT** button ⓱ for more than 2 seconds until 'Ejecting All Discs' appears on the display and a beep sounds. The display, beeps and Eject Indicator Light ⓴ will prompt you when it is time to remove each CD.

The 'Ejecting All Discs' function can be cancelled by briefly pressing the **LOAD** button ⓳, or by turning the audio system OFF.

Note It is possible to eject one or more CDs when the vehicle's ignition key is off, but the audio system will switch off after removing the CD(s).

6 CD CHANGER OPERATION (LEVEL 1) cont.

Playing CDs

- Press the ⏻ button ⓰ if the previous mode was CD.
- Press the **CD** button ⓮ if the vehicle's accessories or ignition is on.
- Press the **CD** button ⓮ if the vehicle's accessories or ignition is off to turn on the audio system in CD source.

Stopping a CD

Press the **BAND** button ❹ to stop CD playback and resume in radio mode or press the **AUX** ⓬ button to stop CD playback and resume in AUX mode, or press the ON/OFF button ⓰.

Pausing a CD

Press the ▮▮ button ⓭ to pause the CD playback. 'Paused' will be shown on the display. Press it again to continue playing the CD.

CD Endless Playback

When the player reaches the end of a CD it automatically loads and plays the next CD. If no other CD is available, it returns to the start and plays the current CD.

Disc Selection

When more than one disc has been loaded into the CD Changer, you can select the one to play by the following methods:

- Briefly press the ≫ button ❾ to select the next disc.
- Briefly press the ≪ button ❼ to select the previous disc.

Folder Selection (when using MP3-Discs)

When listening to an MP3-CD you can select folders by:

- Press and hold the ≫ button ❾ longer than 2 seconds to select the next folder on the MP3-CD.
- Press and hold the ≪ button ❼ longer than 2 seconds to select the previous folder.

Track Selection

Press the ≫| button ⓯ to go to the next track of the current CD/folder, or press it repeatedly until the desired track is reached.

Press the |≪ button ❷ to go back to the start of the current track, or press it repeatedly until the desired track is reached.

Fast Forward/Fast Back (Track Cue/Review)

Press and hold the ≫| ⓯ or |≪ ❷ button to rapidly move forward or backward within the current track.

6 CD CHANGER OPERATION (LEVEL 1) cont.

Choosing Track and Folder using the MP3-Browse Mode

When listening to MP3-CDs, you can browse the directories (folders) and tracks of the MP3-CD to find a track more easily.

To choose a track in the actual folder:

1. Press the button **3 BROWSE MP3** ❶.

The files of the currently played folder are shown. The actual track is highlighted.

2. Highlight the desired track by turning the Volume Control Dial ❽.
3. Press the Volume Control Dial ❽.

   The chosen track will be played.

To choose a track in a different folder:

1. Press the button **3 BROWSE MP3** ❶.

   The files of the currently played folder are shown. The actual track is highlighted.
2. Highlight the first entry (FOLDER LIST) by turning the Volume Control Dial ❽.
3. Press the Volume Control Dial ❽.

   The list of the folders of the actual CD is displayed.
4. Highlight the desired folder by turning the Volume Control Dial ❽.
5. Press the Volume Control Dial ❽.

   The files of the chosen folder are shown.
6. Highlight the desired track by turning the Volume Control Dial ❽.
7. Press the Volume Control Dial ❽.

   The chosen track will be played.
8. To exit MP3-Browse Mode press the button **3 BROWSE MP3** ❶.

   Note In MP3-browse mode, the currently playing track is displayed at the bottom of the MP3 browse mode screen. Pressing ⏮ ❷ or ⏭ ⓯ or using the steering wheel remote control scroll wheel ❷, will change the currently played track but will not move the highlighted track.

CD Repeat

You can choose between different modes for repeat:

- REPEAT TRACK,
- REPEAT DISC, and
- REPEAT FOLDER (only when using MP3-CDs).
- Press the preset button ❶ **REPEAT** until the desired repeat function is activated.

To cancel this function, press the preset button ❶ **REPEAT** until the repeat function is deactivated.

6 CD CHANGER OPERATION (LEVEL 1) cont.

CD Random

You can choose between different modes for random play:

- RANDOM TRACK for CD,
- RANDOM DISC for CD,
- RANDOM IN DISC for MP3-CDs and
- RANDOM IN FOLDER for MP3-CDs.

1. Press the preset button ❶ **RANDM** until the desired Random function is activated.

To cancel this function, press the preset button ❶ **RANDM** until the Random function is deactivated.

If the button ⏭ ⓯ is pressed while in random play mode, the next random selection will be made immediately .

AUX OPERATION (LEVEL 1)

AUX operation

This unit is equipped with an AUX input socket ⓫ at the front of the audio system. You can connect any suitable audio source to the AUX input socket e.g. portable MP3 player. There is also a secondary AUX input connector on the rear of the audio system for use with an optional DVD player. This is called the 'Rear AUX' in the menu and can be enabled/disabled via the menu. You can select the DVD source sound through the audio system speakers (all models).

Starting AUX operation

1. Press the **AUX** mode button ⓬.

When last used AUX source was front AUX and a device is still plugged into the front AUX socket, then front AUX is chosen.

If rear AUX is enabled and there is no device plugged in the front AUX input socket the audio system switches to the DVD player source (if a DVD is fitted). If no device is plugged into the front AUX input socket, AUX operation is terminated and the last used source is used again. If you have disabled rear AUX (see section 'Enable/disable rear AUX'), the audio system always switches to front AUX.

To switch between front and rear AUX:

- Press the **AUX** mode button ⓬ to switch between the front AUX input socket (only applicable if devices are plugged in) and rear AUX*.

Note

- The sensitivity of the AUX input socket is tuned to suit "line level" audio sources. Hence "headphone level" audio sources will not be as loud in volume.
- Adjust the portable device volume level in conjunction with the audio system level to obtain the correct volume level.

Enable/disable rear AUX*

You can disable the rear AUX as an audio source.

1. Access the Option menu by pressing the Volume Control Dial ❽ when the audio system is switched on.
2. Highlight the menu item 'REAR AUX' by turning the Volume Control Dial ❽ clockwise.
3. Press the Volume Control Dial ❽.
4. Turn the Volume Control Dial to switch between the setting 'ON' or 'OFF'.
5. Press the Volume Control Dial ❽ to confirm your setting.
6. To exit the menu, select the 'EXIT' option or wait 8 seconds.

*DVD OPERATION**

The DVD player is mounted in the roof pod, above the rear seat. For DVD operation, refer to chapter 1C.

ADDITIONAL FEATURES (LEVEL 1)

Speed Dependent Volume (SDV)

The SDV system adjusts the audio system volume depending on the vehicle's speed. As the vehicle's speed increases, the volume of the audio system also increases to compensate for the driving noise.

Note This feature will never completely compensate for the driving noise. There are other variable factors such as road surface, wind noise, windows open, engine speed etc., that may alter the interior noise for any given road speed.

For this reason, there are different levels of compensation available to allow you to find one that suits your average driving conditions best.

You can select the compensation rates between 'OFF' and 'CUR 6 (Curve)' (maximum compensation) in the Options Menu.

To alter the SDV setting:

1. Enter the Options menu by pressing the Volume Control Dial ❽ when the audio system is switched on.

   The menu item 'AUDIO' is highlighted.
2. Turn the Volume Control Dial ❽ clockwise to highlight 'AUD SETUP'.
3. Press the Volume Control Dial ❽ to access the audio setup menu.
4. Turn the Volume Control Dial ❽ clockwise to highlight 'SD VOLUME'.
5. Press the Volume Control Dial ❽ to access the SDV setting.
6. Turn the Volume Control Dial ❽ clockwise or anti-clockwise to alter the SDV setting.
7. Press the Volume Control Dial ❽ to exit and store the setting.
8. To exit the menu, select the 'BACK' option or wait 8 seconds.

Dynamic Distortion Limiter (DDL)

Your audio system is equipped with a system that limits the amount of amplifier distortion you can hear. When this feature is turned on, it continuously monitors the quality of the signal to the speakers. When the signal distortion exceeds preset limits, the audio system will automatically limit or reduce the volume until the distortion is minimised. The system is dynamic so that it is always monitoring the sound in order to deliver the selected volume level without distortion. Under some circumstances distortion may be heard for a very short time until the system has taken the necessary steps to limit it.

Note The main source of distortion in music is the low frequency bass caused by drums or large instruments. Tracks that feature very strong bass may trigger the distortion limiting system which will then reduce the volume to minimise the distortion. Increasing the Bass control may also result in a reduced volume level due to the emphasised bass. If desired, the DDL can be turned off in these circumstances so that the audio system will deliver a higher volume level. Naturally, distortion will also be increased. You can select the distortion limiter rates between 'OFF' and 'CUR 3 (Curve)' (maximum limiting) in the Options Menu.

ADDITIONAL FEATURES (LEVEL 1) cont.

To turn distortion limiting on and off:

1. Enter the Options menu by pressing the Volume Control Dial ❽ when the audio system is switched on.
   The menu item 'AUDIO' is highlighted.
2. Turn the Volume Control Dial ❽ clockwise to highlight 'AUD SETUP'.
3. Press the Volume Control Dial ❽ to access the audio setup menu.
4. Turn the Volume Control Dial ❽ clockwise to highlight 'DDL'.
5. Press the Volume Control Dial ❽ to access the DDL setting.
6. Turn the Volume Control Dial ❽ clockwise or anti-clockwise to alter the DDL setting.
7. Press the Volume Control Dial ❽ to exit and store the setting.
8. To exit the menu, select the 'BACK' option or wait 8 seconds.

Display settings

You can set the display illumination mode and the display brightness. The display brightness can be adjusted in steps from -5 to +5, the illumination mode from standard ('STD') to -5.

To change the display settings:

1. Enter the Options menu by pressing the Volume Control Dial ❽ when the audio system is switched on.
   The menu item 'AUDIO' is highlighted.
2. Turn the Volume Control Dial ❽ clockwise to highlight 'DISPLAY'.
3. Press the Volume Control Dial ❽ to access the display setup menu.
4. Turn the Volume Control Dial ❽ clockwise to highlight either 'CONTRAST' or 'BRIGHTNESS'.
5. Press the Volume Control Dial ❽ to access the setting.
6. Turn the Volume Control Dial ❽ clockwise or anti-clockwise to alter the setting.
7. Press the Volume Control Dial ❽ to exit and store the setting.
8. To exit the menu, select the 'BACK' option or wait 8 seconds.

HELP MENU

This unit is equipped with a help menu to help you understand the audio system and its functions.

You can display help texts for each of the audio system buttons

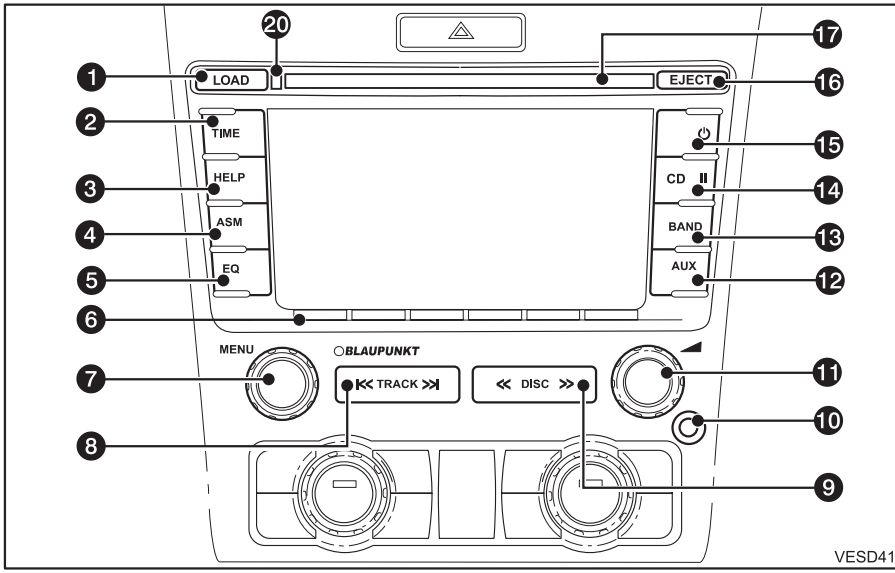
1. Press the **HELP** button ❻ to enter the help menu.
2. Highlight the menu item by pressing the Volume Control Dial ❽.
3. Press any of the audio system buttons to display it's help text. To go one level back in the menu, press the HELP button ❻ again.

You can display help texts for each of the audio system functions

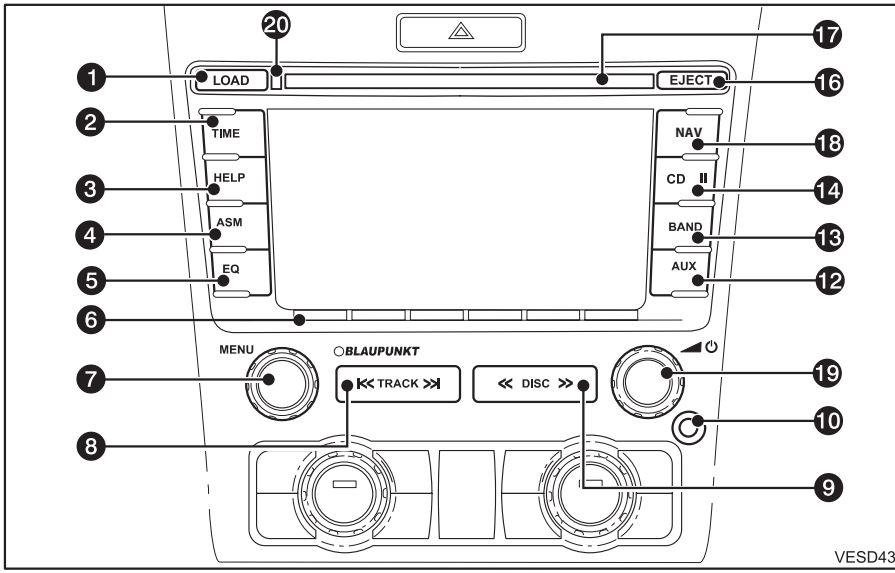
1. Press the **HELP** button ❻ to enter the help menu.
2. Highlight the menu item by pressing the Volume Control Dial ❽.
3. Press the Volume Control Dial ❼. Highlight the desired help topic by pressing the Volume Control Dial ❽. The help text is displayed. To go one level back in the menu, press the **HELP** button ❻ again.

OVERVIEW (LEVEL 2 AND 3)

BERLINA



SS-V, CALAIS, CALAIS-V



OVERVIEW (LEVEL 2 AND 3) cont.

CONTROLS FOR LEVEL 2 AND 3

❶ CD Load button.
Long press: To Load all discs.
Single press: To Load one disc.
❷ Short press: Show time and date.
Long press: Adjust clock and calendar.
❸ Enter Help menu.
❹ Automatic Station Memory storage.
❺ Equalizer On/Off/Setting – Press and hold turns EQ off.
❻ Softkeys. Functions depend on menu shown in the display.
❼ Menu Control (push and turn action).
Push the menu control to enter the options menu.
Turn the menu control to select menu items.
Push the menu control to enter menu items.
❽ Radio Mode: Automatic frequency select.
CD Mode short press: Track up/down.
CD Mode press and hold: Track cue/review.
❾ Radio Mode: Manual frequency select.
CD Mode: Disc select.
❿ Socket for front AUX source.
⓫ Volume and Mute control dial (level 2 Berlina only).
Turn: To increase/decrease volume.
Press: To mute/de-mute.
⓬ AUX source button.
Select AUX source (if AUX source is plugged in).
Toggle between front and rear AUX source.
⓭ Radio band button.
Toggle between FM1, FM2 and AM band. When ASM is selected, toggle between FM ASM and AM ASM.
⓮ CD source button.
CD Mode: CD pause button.
⓯ Power Off/On (level 2 Berlina only).
⓰ CD Eject button.
Long press: To eject all discs.
Single press: To eject one disc.
⓱ CD load/remove slot.
⓲ Navigation System Selection button*.
⓳ Volume and Power On/Off Control Dial (Calais and SS-V only).
Turn: To increase/decrease volume.
Press: To turn on/off.
⓴ CD Load indicator light.

IMPORTANT INFORMATION (LEVEL 2 AND 3)

NOTES ON RADIO OPERATION

- Do not apply any cleaning solution or solvents, or other forms of liquid, to the audio system as this may cause damage to the display and/or electronics, and void the warranty.
- Do not insert anything other than CDs into the CD slot (no foreign objects) as this could cause damage to the CD mechanism. If foreign objects are found in the audio system then warranty will be void.
- Do not insert CDs that have labels attached. Labels can come off and damage the CD mechanism.
- Excessively scratched or dirty CDs may not play correctly.
- Under direct sunlight the radio display may become difficult to read.

SECURITY CODE (ALL UNITS)

Your audio system includes an electronically coded security system.

This electronically links the audio system to your vehicle. Under normal circumstances you will be unaware of its operation and shouldn't need to take any action to enable the audio system to work, even if the vehicle's battery has been disconnected and reconnected.

When the electronic link between the vehicle and the audio system is interrupted, the display 'Security Lockout Active' will be shown. In this case, please contact your Holden Dealer.

Security Indicator Light

Note For added security a small red light ⓴ on the audio system blinks while the ignition is off.

IMPORTANT INFORMATION (LEVEL 2 AND 3) cont.

SETTING THE CLOCK & CALENDAR (LEVEL 2 AND 3)

Note The clock and calendar can be adjusted when the audio system is either on or off.

Adjust the clock and calendar as follows:

1. Press and hold the **TIME** button ❷ for more than 2 seconds. The display will show the Options menu with the time settings activated. The hours are highlighted.
2. To adjust the hours, press the Menu Control Dial ❼.
3. Adjust the hours by turning the Menu Control Dial ❼.
4. To adjust the minutes, first press the Menu Control Dial ❼ then highlight the menu item ‘Minute’ and press the Menu Control Dial ❼.
5. Adjust the minutes by turning the Menu Control Dial ❼.
6. Repeat this procedure for the year, month and date.
7. To exit this mode, press the **TIME** button ❷ once more.

Note The audio system will automatically exit this mode if no adjustments are made for 8 seconds.

SWITCHING ON/OFF (LEVEL 2 AND 3)

ON/OFF

Switch the audio system off and on by pressing the ⏻ button ⓯ (Berlina) and ⓳ (all other models).

On/Off (Using ignition key)

The audio system can operate when the ignition key is turned to the Accessories position. When the vehicle's Accessories Control is turned off by turning the ignition key off and opening the driver's door, the audio system (if operating) will be switched off. When the key is switched to the Accessories position again, the audio system will also be switched on.

On/Off (Without ignition key)

The audio system can also be switched on and off without using the vehicle's ignition key by pressing the ⏻ button ⓯ (Berlina) and ⓳ (all other models). The audio system will operate for approximately 1 hour. Once this period has elapsed the audio system automatically switches off and will not operate until the ⏻ button ⓯ (Berlina) and ⓳ (all other models) is pressed again, or the ignition key is in the Accessories or Ignition position.

On/Off when Accessories or Ignition is on

When the ignition key is in the Accessories or Ignition position the audio system can be turned on (if off) with the following buttons:

- Pressing the ⏻ button ⓯ (Berlina) and ⓳ (all other models).
- **CD** button ⓮.
- **BAND** button ⓭.
- **AUX** button ⓬.
- CD **LOAD** button ❶.
- Plug an AUX source into the audio system's front AUX socket ❿.

*PERSONAL IDENTITY KEYS (LEVEL 2 AND 3)**

Memory 1 and Memory 2

This audio system features Personal Identity Memories, which provide two different memories of electronic settings for different ignition keys.

For the sound system the following settings are individually memorised by the key system and become unique to the particular key:

- Audio system On or Off.
- Last used Volume level.
- Last used Mode (AM, FM or CD).
- FM1, FM2, AM, FM ASM, AM ASM – Radio Memory Presets.
- Bass and Treble settings.
- Speaker Balance and Fader settings.
- Additional features Speed dependant volume, beeps, DDL settings, display priority settings and tuner seek sensitivity.
- Equalizer and Boost settings.
- CD track and disc settings.

When entering the Radio Memory Presets for the first time they will be automatically stored for both Personal Identity Keys. If these presets are changed later by using a different Personal Identity Key, they will become specific for that key only, so from that point on they will be unique to that key.

AUDIO SETTINGS (LEVEL 2 AND 3)

SOURCE (MODE) SELECTION

The radio mode can be selected by any of the following actions:

- Pressing the ⏻ button ⓯ (Berlina) and ⓳ (all other models) if the previously played source was radio.
- Pressing the **BAND** button ⓲.

The CD mode can be selected by any of the following actions:

- Pressing the ⏻ button ⓯ (Berlina) and ⓳ (all other models) if the previously played source was CD.
- Pressing the **CD** button ⓮.
- Pressing the **LOAD** button ❶ to load a CD.

The AUX mode can be selected by any of the following actions:

- Plugging a portable source into the front AUX.
- Pressing the AUX button.

AUDIO SETTINGS

Volume

Turning the Volume Control Dial ⓫ (Berlina) ⓳ (all other models) clockwise will increase the volume, turning it anti-clockwise will decrease the volume.

Independent Tone Memories

This audio system is equipped with Independent Tone Memories.

Bass and Treble can be set independently for each listening mode such as AM, FM and CD.

After all individually preferred tone settings have been stored while using one particular ignition key, the same procedure can be repeated with different settings while the other ignition key is used.

Bass

1. Enter the Option menu by pressing the Menu Control Dial ❼ when the audio system is switched on.

   The menu item ‘Audio’ is highlighted.
2. Press the Menu Control Dial ❼ to access the audio menu.

   The menu item ‘Bass’ is highlighted.
3. Press the Menu Control Dial ❼ to access the bass setting.
4. Turn the Menu Control Dial ❼ clockwise or anti-clockwise to alter the bass setting. Bass can be changed from -6 to +6 through 0 (STD) in step size of 1.
5. To exit the menu, select the ‘Back’ option or wait 8 seconds.

AUDIO SETTINGS (LEVEL 2 AND 3) cont.

Treble

1. Enter the Option menu by pressing the Menu Control Dial ❼ when the audio system is switched on.

   The menu item 'Audio' is highlighted.
2. Press the Menu Control Dial ❼ to access the audio menu.
3. Turn the Menu Control Dial ❼ clockwise to highlight 'Treble'.
4. Press the Menu Control Dial ❼ to access the treble setting.
5. Turn the Menu Control Dial ❼ clockwise or anti-clockwise to alter the treble setting. Treble can be changed from -6 to +6 through 0 (STD) in step size of 1.
6. To exit the menu, select the 'Back' option or wait 8 seconds.

Fader

To shift the sound towards the rear or front:

1. Enter the Option menu by pressing the Menu Control Dial ❼ when the audio system is switched on.

   The menu item 'Audio' is highlighted.
2. Press the Menu Control Dial ❼ to access the audio menu.
3. Turn the Menu Control Dial ❼ clockwise to highlight 'Fader'.
4. Press the Menu Control Dial ❼ to access the fader setting.
5. Turn the Menu Control Dial ❼ clockwise or anti-clockwise to alter the fader setting. Fader can be changed from F6 (front) to R6 (rear) through 0 (STD) in step size of 1.
6. To exit the menu select the 'Back' option or wait 8 seconds.

Balance

To shift the sound towards the right or the left:

1. Enter the Option menu by pressing the Menu Control Dial ❼ when the audio system is switched on.

   The menu item 'Audio' is highlighted.
2. Press the Menu Control Dial ❼ to access the audio menu.
3. Turn the Menu Control Dial ❼ clockwise to highlight 'Balance'.
4. Press the Menu Control Dial ❼ to access the balance setting.
5. Turn the Menu Control Dial ❼ clockwise or anti-clockwise to alter the balance setting. Balance can be changed from L6 (left) to R6 (right) through 0 (STD) in step size of 1.
6. To exit the menu, select the 'Back' option or wait 8 seconds.

AUDIO SETTINGS (LEVEL 2 AND 3) cont.

EQUALIZER FUNCTION

The audio unit is equipped with five pre-programmed equalizer curves. Each of these curves have been factory-programmed to enhance a particular style of music. However it may be used with any type. To turn this function on or off, or to scroll through the five EQ curves, press the **EQ** button ❺ one or more times.

The five pre-programmed settings are:

- Rock.
- Pop.
- Jazz.
- Classic.
- Vocal.
- and off.

Equalizer Off

The equalizer function can be turned off by pressing the **EQ** button ❺ one or more times until 'EQ Off' appears on the display. It can also be turned off by pressing and holding the **EQ** button ❺ for more than two seconds.

Note The Equalizer can also be set using the 'Equalizer' menu item in the 'Audio' menu.

Equalizer Boost (Calais and SS-V)

While any equalizer style (e.g. Rock, Pop, etc.) is being used, the amount of enhancement of that style can be altered.

1. Enter the Option menu by pressing the Menu Control Dial ❼ when the audio unit is switched on.

   The menu item 'Audio' is highlighted.
2. Press the Menu Control Dial ❼ to access the audio menu.

   The menu item 'Eq Boost' is highlighted.
3. Press the Menu Control Dial ❼ to access the Eq Boost setting.
4. Turn the Menu Control Dial ❼ clockwise or anti-clockwise to alter the boost setting. Boost can be changed from -2 (minimum) to +2 (maximum) through STD in step size of 1.
5. To exit the menu, select the 'Back' option or wait 8 seconds.

Note Different amounts of boost can be set for each of the five EQ curves.

AUDIO SETTINGS (LEVEL 2 AND 3) cont.

LOUDNESS CONTOUR CIRCUIT (ONLY LEVEL 3) (CALAIS AND CALAIS-V)

A user selectable loudness contour circuit to enhance the Bass and Treble response at low volume levels can be activated if you feel that the sound system needs more bass and treble at low listening levels.

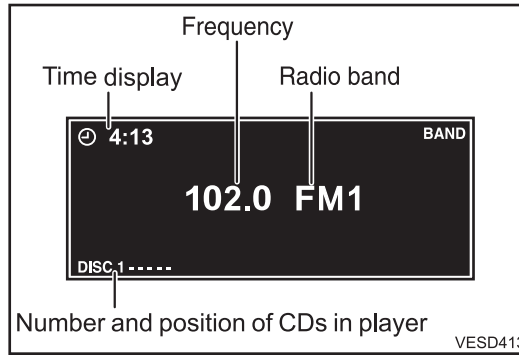
To activate it:

1. Enter the Option menu by pressing the Menu Control Dial ❼ when the audio system is switched on.

   The menu item ‘Audio’ is highlighted.
2. Press the Menu Control Dial ❼ to access the audio menu.
3. Turn the Menu Control Dial ❼ clockwise to highlight ‘LOUDNESS’.
4. Press the Menu Control Dial ❼ to access the Loudness setting.
5. Turn the Menu Control Dial ❼ clockwise or anti-clockwise to select Loudness On or Off setting.
6. To exit the menu select the ‘BACK’ option or wait 8 seconds.

RADIO OPERATION (LEVEL 2 AND 3)

Radio Display



Selecting a Radio Band

Press the **BAND** button ⓭ repeatedly to select one AM and two FM bands (FM1 & FM2). The chosen band will be shown on the display. If the ASM mode is active ('ASM' appears on the display), one AM ASM band and one FM ASM band can be selected.

For further information on the ASM mode, refer to *Automatic Station Memory* further on in this chapter.

Manual Tuning

Press the ≫ button ❾ or the ≪ button ❾ to tune the frequency band up or down. The frequency changes in steps of 9 kHz for AM and 0.1 MHz for FM.

Automatic Seek Tuning

This function seeks radio stations automatically. Press the ≫| button ❽ to select the next higher frequency radio station automatically. Press the |≪ button ❽ to select the next lower frequency radio station automatically.

Auto/Local/Distance selection ('Seek Sens' in the menu)

The LOCAL function reduces the radio's seek tuning sensitivity in AM and FM modes. This will cause the SEEK tuning to stop only on stations with strong signals i.e. city area.

If you are performing a SEEK function in an area where few or no stations can be found when LOCAL ('LO') is active, you can choose DISTANCE ('DX') so that weaker i.e. country area stations may also be found.

You can also choose the AUTO option. With AUTO selected, the radio first searches for local stations and, if no stations can be found, the radio searches for all stations.

Note

- If local stations are found using auto mode, the radio will not search for distance stations.
- It is advisable to set the seek sensitivity to distance (DX) mode, so that all stations are found. Unless you are trying to avoid weaker stations.

RADIO OPERATION (LEVEL 2 AND 3) cont.

Note The Local/Distance selector has no effect when the ASM search feature is being used.

1. Access the Option menu by pressing the Menu Control Dial ❼ when the radio is switched on.
2. Highlight the menu item 'Seek sens' by turning the Menu Control Dial ❼ clockwise.
3. Press the Menu Control Dial ❼ to access the seek sensitivity setting.
4. Turn the Menu Control Dial clockwise or anti-clockwise to choose one of the settings 'Local', 'Distance' or 'Auto'.
5. To exit the menu, select the 'Back' option or wait 8 seconds.

STORING STATIONS

The radio is equipped with 30 stations presets.

- 6 x FM1
- 6 x FM2
- 6 x AM
- 6 x FM ASM (Automatic Station Memory FM Stations)
- 6 x AM ASM (Automatic Station Memory AM Stations)

Storing a Radio Station into a Preset

1. Select the desired radio band, AM, FM1 or FM2 using the **BAND** ⓭ button.
2. Tune to the desired station by means of:
   - Automatic seek tuning or
   - Manual tuning.
3. Press and hold the desired softkey **1** to **6** ❻ until the selected station frequency number is displayed. The radio is briefly muted or a beep sounds (if beeps are turned on, refer to the section *Confirmation Beeps* further on in this chapter), indicating that the chosen radio station has been stored into the preset. The previously stored station is replaced.
4. Store stations on the other softkeys in the same way.
5. Repeat the same procedure for the other radio bands AM, FM1, and FM2.

Recalling Stored Stations

1. Select a radio band, AM or FM.
2. Briefly press the desired softkey **1** to **6** ❻.

To select one of the stations stored with Automatic Station Memory (ASM), select the AM or FM radio band, then briefly press the **ASM** button ❹.

Now press the desired softkey.

RADIO OPERATION (LEVEL 2 AND 3) cont.

Automatic Station Memory (ASM)

This feature allows the storage of additional 6 AM and 6 FM radio stations. It is of great benefit when travelling long distances, e.g. on holidays, since you can store the strongest radio stations without knowing their frequency. This does not delete the stations already stored on FM1, FM2 or AM.

Using Automatic Station Memory

1. Select the desired radio band with the **BAND** ⓭ button.
2. Press the **ASM** button ❹ for at least two seconds until the sound is briefly muted or a beep sounds (if Confirmation Beeps are turned on, refer to *Confirmation Beeps* further on in this chapter). Search tuning starts and 'STATIONS FOUND' followed by the number of stored stations appears on the display. This depends on the setting for the seek sensitivity (see 'Local/Distance selection' on the previous page).

After the ASM process is finished, the six strongest stations found in the area are stored. The radio will play the station stored on preset ❶.

If you have travelled beyond the range of the stored stations, you may wish to repeat the process again to store new stronger stations.

To alternate between the ASM radio stations and your normally stored radio stations (on FM1, FM2 or AM), briefly press the **ASM** button ❹.

Whenever you are using the AM ASM or the FM ASM bands, 'ASM' will also be shown on the display.

You can also store stations manually in the ASM station presets (see 'Storing a Radio Station into a Preset' on the previous page).

ANTENNA INFORMATION

Refer to *Antenna Information* further on in this chapter.

RADIO RECEPTION

Due to varying reception locations, vehicle radios have performance limitations that may occasionally create the impression that your radio is malfunctioning. To assist you in understanding what can be expected from your radio, we have set out below how reception may vary from time to time and under certain conditions.

AM and FM

There are two types of radio broadcasting frequencies, AM (Amplitude Modulation) in which the amplitude of the signal is varied to produce the sound and FM (Frequency Modulation) in which the frequency is varied to produce the sound.

Range

AM broadcasts tend to follow the earth's curvature and are also reflected by the upper atmosphere, which enables long range reception, especially after sunset.

FM transmissions are basically line-of-sight signals (similar to TV signals) and are reflected by buildings, mountains etc., but not by the upper atmosphere.

RADIO OPERATION (LEVEL 2 AND 3) cont.

Interference

Interference is caused by either natural or man made electrical disturbances. This can affect the amplitude of the reception signal. AM signals are more prone to this type of interference than FM signals. This type of interference has little or no effect on the frequency of the reception signal, thus AM is susceptible to interference from power lines, fluorescent lighting, neon signs, traffic light control circuits, overhead tram wires and electrical storms. With FM reception, these amplitude variations are filtered out, leaving a relatively clear signal (refer to 'Peculiarities of FM Mobile Reception'), which is one of the major advantages of FM broadcasts.

Dual fuel vehicles (LPG)*

Vehicles fitted with dual fuel systems may experience reduced reception at times.

Peculiarities of FM Mobile Reception

A mobile FM receiver cannot be expected to continuously provide the quality of FM reception you may have experienced on your home receiver. Contrary to popular opinion, FM broadcasts are not static free, and although your radio has a built-in electronic interference absorption circuit, some static will occur from time to time, especially in areas without a direct line of sight to the transmitter.

There are two phenomena that are characteristic of FM reception:

- **Flutter** – When FM signals are reflected by solid objects, they can pass through areas of 'shadow' caused by tall buildings and/or hilly terrain, which effectively blocks out the signal. As the vehicle passes in and out of shadow areas, the signal level will vary at a rapid rate, creating a flutter type of interference to the signal.
- **Distortion (Multipath)** – Distortion may occur when the direct signal from the transmitter and a reflected signal reach the antenna at the same time and either cancel or support each other, like ghosting on a TV. This results in intermittent distortion of the signal while moving or constant distortion when stationary, e.g. at a traffic light or when parking. Should this distortion occur while stationary, moving the vehicle approximately 1 or 2 metres usually corrects the problem.

To reduce the effects of interference and/or poor signal strength, several features have been included in the radio which work automatically when needed:

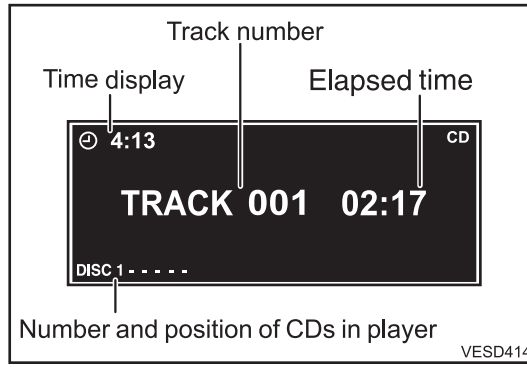
- **Noise Blanking Circuit** (FM interference suppression) – This radio has been equipped with a Noise Blanking Circuit to reduce pulse interference.
- **Soft Muting Circuit** – The built-in Soft Muting Circuit will reduce the FM stereo separation and treble response if the signal from the radio station deteriorates. This effect lessens the amount of audible hiss and background noises that are usually heard with weaker FM signals.
- **Multipath Detection Circuit** – If repeated multipath signals are received, the circuitry will switch the radio into MONO mode and slightly reduce the treble response. It will gradually return to STEREO with full treble response when the multipath conditions fade.
- Diversity Antenna System*. Refer to *Antenna Information* further on in this chapter.

CD CHANGER OPERATION (LEVEL 2 AND 3)

The CD Changer holds up to six CDs at one time. The Changer is built into the audio system and CDs are loaded through the single slot ⓱ on the front face of the audio system, after pressing the **LOAD** button ❶ (refer to 'Loading a CD' on the next page).

Note The CD Changer is designed for standard 12 cm CDs only. Using incorrect sized CDs (e.g. 8 cm or 3 inch CDs) may damage the Changer or the disc, even if an adapter is used.

CD Display



- Press the softkey ❻ DISPLAY MODE repeatedly until the desired display mode is shown.

For CD operation, the following modes are available:

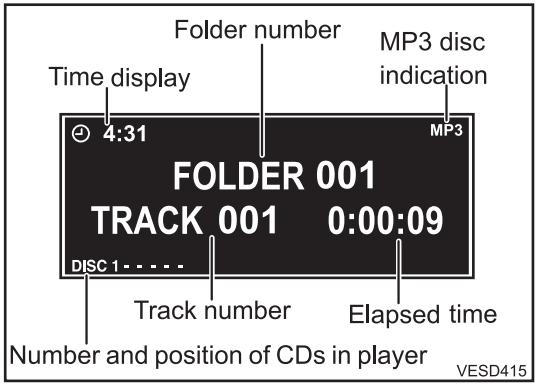
- Normal mode with track number and playtime.
- Track info mode with track number, playtime, and track name. Track name can only be displayed when the appropriate data is stored on the CD (CD text).
- Disc info mode with track number, playtime, and name of CD. The CD name can only be displayed when the appropriate data is stored on the CD (CD text).
- Disc and track info mode with track name and name of CD. Track name and CD name can only be displayed when the appropriate data is stored on the CD (CD text).

Note

- Track information display mode is unavailable if a track without information is played.
- Track information mode is cancelled if a track without information is played.

CD CHANGER OPERATION (LEVEL 2 AND 3) cont.

MP3 Display



- Press the softkey ❻ DISPLAY MODE repeatedly until the desired display mode is shown.

For MP3-CD operation the following modes are available:

- Normal mode with folder number, track number and playtime.
- Folder info mode with folder number, track number, folder name and track name. Folder name can only be displayed when the appropriate data is stored on the CD (MP3 ID tag).
- Artist info mode with folder number, track number, artist name and track name. Artist name can only be displayed when the appropriate data is stored on the CD (MP3 ID-tag).
- Song title mode with folder number, track number and track name.

Note

- Track information display mode is unavailable if a track without information is played.
- Track information mode is cancelled if a track without information is played.
- There are limitations on the number of sub-directories that can read. Not all MP3 CDs are compatible.
- To display the name of the artist and song title information, this information has to be stored on the MP3-CD as ID-Tag together with the track.

CD Display Symbols

The display shows DISC and six numbers that represent the six CD storage locations within the CD Changer. When a storage location within the CD Changer has no disc loaded, '–' is displayed. When a CD is loaded into the Changer the number of the CD is displayed to show that there is a CD loaded in that storage location.

When a CD is playing, its number is highlighted on the screen.

CD CHANGER OPERATION (LEVEL 2 AND 3) cont.

Loading a CD

To load a CD into the CD Changer, briefly press the **LOAD** button ❶. When the Changer is ready to accept the CD, 'Insert Disc' will be displayed.

The Load Indicator Light ⓴ will flash green, and the audio system will beep twice (if beeps are turned on). Insert the CD with the label surface facing upwards, into the CD slot ⓱ until the mechanism pulls the CD inside and it begins to play.

The LOAD function can be cancelled by briefly pressing the **EJECT** button ⓰, turning the audio system OFF, or it will cancel automatically if no disc has been inserted within 10 seconds after the 'Insert Disc' message is displayed.

Loading all CDs

A function has been included to allow the loading of up to six CDs without having to repeatedly press the LOAD button.

To start the 'Loading all Discs' function, push and hold the **LOAD** button ❶ for more than 2 seconds until a beep sounds (if beeps are turned on) and the display shows 'Loading all Discs'. The display, beeps and Load Indicator Light ⓴ will prompt you when it is time to insert each CD.

This function is cancelled automatically when no CD has been inserted for 10 seconds, by briefly pressing the **EJECT** button ⓰, or by turning the audio system OFF.

Note It is possible to insert and load CDs while the vehicle's ignition key is turned off. The audio system will turn off after loading the CDs.

Ejecting a CD

To remove the currently selected CD, briefly press the **EJECT** button ⓰. When the CD is ready for removal from the CD slot ⓱, 'Remove Disc' will be displayed. The Eject Indicator Light ⓴ will flash and the audio system will beep twice (if beeps are turned on).

If you wish to eject a CD that is not currently playing, briefly press the **EJECT** button ⓰ followed by the softkey ❻ that is assigned to the CD you wish to eject within 3 seconds.

The **EJECT** function can be cancelled by briefly pressing the **LOAD** button ❶ or by turning the audio system OFF.

Note If an ejected CD is not removed within 10 seconds, it will be automatically reloaded to protect it from accidental damage.

Ejecting all CDs

All CDs within the CD Changer can be ejected by pushing and holding the **EJECT** button ⓰ for more than 2 seconds until 'Ejecting all Discs' appears on the display and a beep sounds (if beeps are enabled). The display, beeps and Eject Indicator Light ⓴ will prompt you when it is time to remove each CD.

The 'Ejecting all Discs' function can be cancelled by briefly pressing the **LOAD** button ❶, or by turning the audio system OFF.

Note It is possible to eject one or more CDs when the vehicle's ignition key is off, but the audio system will switch off after removing the CD(s).

CD CHANGER OPERATION (LEVEL 2 AND 3) cont.

Playing CDs

- Press the ⏻ button ⓯ (Berlina) and ⓳ (all other models) if the previous mode was CD.
- Press the **CD** button ⓮.

Stopping a CD

Press the **BAND** ⓭ button to stop CD playback and resume in radio mode or press the **AUX** ⓬ button to stop CD playback and resume in AUX mode, or press the ⏻ button ⓯ (Berlina) and ⓳ (all other models).

Pausing a CD

Press the **CD II** button ⓮ to pause the CD playback.

'PAUSED' will be shown on the display. Press it again to continue playing the CD.

CD Endless Playback

When the player reaches the end of a CD it automatically loads and plays the next CD. If no other CD is available, it returns to the start and plays the current CD.

Disc Selection

When more than one disc has been loaded into the CD Changer, you can select the one to play by the following methods:

- Briefly press the **DISC** ≫ button ❾ to select the next disc.
- Briefly press the ≪ **DISC** button ❾ to select the previous disc.

Folder Selection (when using MP3-Discs)

When listening to an MP3-CD you can select folders by:

- Press and hold the **DISC** ≫ button ❾ longer than 2 seconds to select the next folder on the MP3-CD.
- Press and hold the ≪ **DISC** button ❾ longer than 2 seconds to select the previous folder.

Track Selection

Press the ⏭ button ❽ to go to the next track of the current CD, or press it repeatedly until the desired track is reached.

Press the ⏮ button ❽ to go back to the start of the current track, or press it repeatedly until the desired track is reached.

Fast Forward/Fast Back (Track Cue/Review)

Press and hold the ⏭ or ⏮ button ❽ to rapidly move forward or backward within the current track.

CD CHANGER OPERATION (LEVEL 2 AND 3) cont.

Choosing track and folder using the MP3-Browse mode

When listening to MP3-CDs, you can browse the directories (folders) and tracks of the MP3-CD to find a track more easily.

To choose a track in the current folder.

1. Press the softkey ❾ BROWSE MODE.
   The files of the currently played folder are shown. The current track is highlighted.
2. Highlight the desired track by turning the Menu Control Dial ❽.
3. Press the Menu Control Dial ❽.
   The chosen track will be played.

To exit the Browse mode:

- Press the softkey ❾ EXIT.

To choose a track in a different folder:

1. Press the softkey ❾ BROWSE MODE.
2. Press either softkey ❾ NEXT FOLDER or PREV FOLDER.
   The files of the folder are shown.
3. Highlight the desired track by turning the Menu Control Dial ❽.
4. Press the Menu Control Dial ❽.
   The chosen track will be played.

To choose a track in a different folder:

1. Press the softkey ❾ BROWSE MODE.
2. Press the softkey ❾ FOLDER LIST.
   The folders of the current MP3-CD are shown. The current folder is highlighted.
3. Highlight the desired folder by turning the Menu Control Dial ❽.
4. Press the Menu Control Dial ❽.
   The files of the chosen folder are shown.
5. Highlight the desired track by turning the Menu Control Dial ❽.
6. Press the Menu Control Dial ❽.
   The chosen track will be played.

   Note In MP3-browse mode, the currently playing track is displayed at the bottom of the MP3 browse mode screen. Pressing ⏮ or ⏭ ❽ or using the steering wheel remote control scroll wheel ❷, will change the currently played track but will not move the highlighted track.

CD Repeat

You can choose between different modes for repeat:

- REPEAT TRACK,
- REPEAT DISC, and
- REPEAT FOLDER (only when using MP3-CDs).

1. Press the softkey ❻ REPEAT.
2. Press one of the softkeys ❻ REPEAT TRACK, REPEAT DISC or REPEAT FOLDER.

To cancel this function, press the softkey ❻ of the currently active repeat mode again.

CD CHANGER OPERATION (LEVEL 2 AND 3) cont.

CD Random

You can choose between different modes for random play:

- RANDOM TRACK for CD,
- RANDOM DISC for CD,
- RANDOM IN DISC for MP3-CDs and
- RANDOM IN FOLDER for MP3-CDs.

1. Press the softkey ❻ RANDOM.
2. Press one of the softkeys ❻ RANDOM TRACK, RANDOM DISC (for CD) or RDM IN DISC or RDM IN FOLDER (for MP3-CD).

   Note If RANDOM DISC is selected when a CD is playing and a combination of CDs and MP3-CDs are loaded, only the CDs will be played.

To cancel this function, press the softkey ❻ of the current active random mode again.

If the buttons ⏭ or ⏮ ❽ are pressed while in random play mode, the next random selection will be made immediately.

CD Changer Memory

Under severe vibration, the CD laser may not be able to maintain the extremely precise focus needed to read the tiny pits on the surface of the CD. When the laser focus is temporarily lost, the data that is read from the CD will also be temporarily interrupted. Your CD Changer is therefore equipped with a memory buffer that holds approximately seven seconds of music which is used to prevent interruption due to severely bumpy surfaces. Should the severe vibration last for longer than seven seconds, the memory buffer may become empty and playback will be interrupted or stopped until the mechanism has time to refocus, read the disc and refill the memory buffer.

This situation should occur very rarely under normal driving conditions.

Playing recordable CDs (CD-Rs or CD-RWs)

It is possible to play CD-R/RWs on this audio system. However, depending on the type/condition of the recording equipment and the blank disc used, some CD-Rs may not play consistently or not at all. Some copy controlled CDs may not play consistently or not at all.

Error Messages from the CD Changer

In some cases, the Changer may have problems playing, loading, or ejecting some CDs. If this happens, one of the following error messages may appear on the display:

1. ‘Mechanism Error’.
2. ‘Error check Disc’.
3. ‘No Discs’.
4. ‘CD Error’.
5. ‘Over Heat Error’.

The player will switch to radio mode after displaying the error message for several seconds.

Consult your Holden Dealer if an error message keeps occurring.

AUX OPERATION (LEVEL 2 AND 3)

AUX operation

WARNING

Do not connect, disconnect or adjust portable devices while driving the vehicle.

This unit is equipped with an AUX input socket ❿ at the front of the audio system. You can connect any suitable audio source to the AUX input socket e.g. portable MP3 player. There is also a secondary AUX input connector on the rear of the audio system for use with an optional DVD player. This is called the 'Rear AUX' in the menu and can be enabled/disabled via the menu. You can select the DVD source display on the audio system (SS-V, Calais, Calais-V) and sound through the audio system speakers (all models).

Note

- Video display will turn off while the vehicle is moving ('Rear AUX' will be displayed)
- If the vehicle is stationary and the DVD is switched off, the audio system will show a blank screen.

Starting AUX operation

- Press the **AUX** mode button ⓬.
- Plug a portable device into the AUX input socket ❿.

When last used AUX source was front AUX and a device is still plugged into the front AUX socket, then front AUX is chosen.

If rear AUX is enabled and there is no device plugged in the front AUX input socket the audio system switches to the DVD player source (if a DVD is fitted). If no device is plugged into the front AUX input socket, AUX operation is terminated and the last used source is used again. If you have disabled rear AUX (see section 'Enable/disable rear AUX'), the audio system always switches to front AUX.

To switch between front and rear AUX:

- Press the **AUX** mode button ⓬ to switch between the front AUX input socket (only applicable if devices are plugged in) and rear AUX*.

Note

- The sensitivity of the AUX input socket is tuned to suit "line level" audio sources. Hence "headphone level" audio sources will not be as loud in volume.
- Adjust the portable device volume level in conjunction with the audio system level to obtain the correct volume level.

Enable/disable rear AUX input*

You can disable the rear AUX as audio source.

1. Access the Option menu by pressing the Menu Control Dial ❼ when the audio system is switched on.
2. Highlight the menu item 'Rear Aux' by turning the Menu Control Dial ❼ clockwise.
3. Press the Menu Control Dial ❼.
4. Turn the Menu Control Dial to toggle between the setting On or Off.
5. Press the Menu Control Dial ❼ to confirm your setting.
6. To exit the menu, select the 'Exit' option or wait 8 seconds.

*DVD OPERATION**

The DVD player is mounted in the roof pod, above the rear seat. For DVD operation, refer to chapter 1C.

ADDITIONAL FEATURES (LEVEL 2 AND 3)

Help menu

This unit is equipped with a help menu to help you understand the audio system and its functions.

Button help

You can display help texts for each of the audio system buttons.

1. Press the **HELP** button ❸ to enter the help menu.
2. Highlight the menu item 'What does each button do?' by turning the Menu Control Dial ❼ clockwise.
3. Press the Menu Control Dial ❼.
4. Press any of the audio system buttons to display it's help text.
5. To go one level back in the menu, press the HELP button again ❸.

Help topics

You can display help texts for each of the audio system functions.

1. Press the **HELP** button ❸ to enter the help menu.
2. Highlight the menu item 'Help topics' by turning the Menu Control Dial ❼ clockwise.
3. Press the Menu Control Dial ❼.
4. Highlight the desired help topic by turning the Menu Control Dial ❼ clockwise or anti-clockwise.

   The help text is displayed.
5. To go one level back in the menu, press the **HELP** button again ❸.

Navigation button* operation

Press the **NAV** button to enter Full Map Navigation if installed. If the **NAV** button is pressed and Full Map Navigation is not installed, the system will remain in the current source. Refer to the Navigation handbook*.

ADDITIONAL FEATURES (LEVEL 2 AND 3) cont.

ADDITIONAL AUDIO SETTINGS

Dynamic Distortion Limiter (DDL)

Your audio system is equipped with a system that limits the amount of amplifier distortion that you can hear. When this feature is turned on it continuously monitors the quality of the signal to the speakers. When the signal distortion exceeds preset limits, the audio system will automatically limit or reduce the volume until the distortion is minimised. The system is dynamic so that it is always monitoring the sound in order to deliver the selected volume level without distortion. Under some circumstances, distortion may be heard for a very short time until the system has taken the necessary steps to limit it.

1. Access the Option menu by pressing the Menu Control Dial ❼ when the audio system is switched on.
2. Highlight the menu item 'Audio setup' by turning the Menu Control Dial ❼ clockwise.
3. Press the Menu Control Dial ❼.

The audio setup menu will be displayed with the menu item 'DDL' highlighted.

4. Press the Menu Control Dial ❼.
5. Turn the Menu Control Dial to switch between 'Off', 'Curve 1', 'Curve 2' and 'Curve 3'.
6. Press the Menu Control Dial ❼ to confirm your setting.
7. To exit the menu, select the 'Back' option or wait 8 seconds.

Note The main source of distortion in music is the low frequency bass caused by drums or large instruments. Tracks that feature very strong bass may trigger the distortion limiting system which will then reduce the volume to minimise the distortion. Increasing the Bass control or EQ Boost control may also result in a reduced volume level due to the emphasised bass. If desired, the DDL can be turned off in these circumstances so that the audio system will deliver a higher volume level. Naturally, distortion will also be increased.

Confirmation Beeps

Audible beeps are used to confirm various actions of the audio system such as storing a radio station.

ON: The audio system will make a beep sound when storing radio stations, when it is time to insert or to remove a CD from the CD Changer, or to confirm that the LOAD ALL or EJECT ALL functions have started.

CD ONLY: The audio system will make a beep sound when it is time to insert or to remove a CD from the CD Changer.

OFF: No beeps are made by the audio system.

ADDITIONAL FEATURES (LEVEL 2 AND 3) cont.

1. Access the Option menu by pressing the Menu Control Dial ❼ when the audio system is switched on.
2. Highlight the menu item ‘Audio setup’ by turning the Menu Control Dial ❼ clockwise.
3. Press the Menu Control Dial ❼.
4. Highlight the menu item ‘Beeps’ by turning the Menu Control Dial ❼ clockwise.
5. Press the Menu Control Dial ❼.
6. Turn the Menu Control Dial to switch between the settings.
7. Press the Menu Control Dial ❼ to confirm your setting.
8. To exit the menu, select the ‘Back’ option or wait 8 seconds.

Speed Dependent Volume (SDV)

The SDV system adjusts the audio system volume depending on the vehicle’s speed. As the vehicle’s speed increases, the volume of the audio system also increases to compensate for the driving noise.

You can select the compensation rates between 0 (off) and 5 (maximum compensation).

1. Access the Option menu by pressing the Menu Control Dial ❼ when the audio system is switched on.
2. Highlight the menu item ‘Audio setup’ by turning the Menu Control Dial ❼ clockwise.
3. Press the Menu Control Dial ❼.
4. Highlight the menu item ‘Speed Vol’ by turning the Menu Control Dial ❼ clockwise.
5. Press the Menu Control Dial ❼.
6. Turn the Menu Control Dial to switch between the five levels of compensation.
7. Press the Menu Control Dial ❼ to confirm your setting.
8. To exit the menu, select the ‘Back’ option or wait 8 seconds.

Note This feature will never completely compensate for the driving noise. There are other factors such as road surface, wind noise, open windows, engine speed, etc., that may alter the interior noise for any given road speed.

For this reason there are five different levels of compensation available to allow you to find the one that suits your average driving conditions best.

ADDITIONAL FEATURES (LEVEL 2 AND 3) cont.

DISPLAY SETTINGS

You can adjust several settings of the display e.g. brightness and contrast to meet your needs.

Brightness setting

The brightness is adjustable from -5 to +5.

1. Access the Option menu by pressing the Menu Control Dial ❼ when the audio system is switched on.
2. Highlight the menu item 'Display' by turning the Menu Control Dial ❼ clockwise.
3. Press the Menu Control Dial ❼.
   The display menu will be displayed with the menu item 'Brightness' highlighted.
4. Press the Menu Control Dial ❼.
5. Turn the Menu Control Dial either clockwise or anticlockwise to set the desired level of brightness.
6. Press the Menu Control Dial ❼ to confirm your setting.
7. To exit the menu, select the 'Back' option or wait 8 seconds.

Note

- The brightness setting described above is set independently of the instrument panel dimmer control.
- If the instrument panel dimmer control is set to maximum brightness level, the audio system cannot be set any brighter.
- If the instrument panel dimmer control is set to minimum brightness level, the audio system cannot be set any darker.

ADDITIONAL FEATURES (LEVEL 2 AND 3) cont.

Contrast setting (Rear DVD player mode only* – Calais, Calais-V)

1. Access the Option menu by pressing the Menu Control Dial ❼ when the audio system is switched on.
2. Highlight the menu item 'Display' by turning the Menu Control Dial ❼ clockwise.
3. Press the Menu Control Dial ❼.
4. Highlight the menu item 'Contrast' by turning the Menu Control Dial ❼ clockwise.
5. Press the Menu Control Dial ❼.
6. Turn the Menu Control Dial either clockwise or anticlockwise to set the desired level of contrast. The level of contrast can be set from -5 to +5 in step size of 1.
7. Press the Menu Control Dial ❼ to confirm your setting.
8. To exit the menu, select the 'Back' option or wait 8 seconds.

Illumination mode*(Berlina)

You can set the illumination mode for the display. You can choose between Day, Night and Auto. With the Auto setting, the display illumination is switched on and off with the headlamps of the vehicle.

1. Access the Option menu by pressing the Menu Control Dial ❼ when the audio system is switched on.
2. Highlight the menu item 'Display Setup' by turning the Menu Control Dial ❼ clockwise.
3. Press the Menu Control Dial ❼.
4. Highlight the menu item 'Illum Mode' by turning the Menu Control Dial ❼ clockwise.
5. Press the Menu Control Dial ❼.
6. Turn the Menu Control Dial either clockwise or anticlockwise to select Day, Night or Auto.
7. Press the Menu Control Dial ❼ to confirm your setting.
8. To exit the menu, select the 'Back' option or wait 8 seconds.

ADDITIONAL FEATURES (LEVEL 2 AND 3) cont.

Colour Setting (Rear DVD player mode only* – Calais, Calais-V)

1. Access the Option menu by pressing the Menu Control Dial ❼ when the audio system is switched on.
2. Highlight the menu item 'Display' by turning the Menu Control Dial ❼ clockwise.
3. Press the Menu Control Dial ❼.
4. Highlight the menu item 'Colour' by turning the Menu Control Dial ❼ clockwise.
5. Press the Menu Control Dial ❼.
6. Turn the Menu Control Dial either clockwise or anticlockwise to set the desired level of colour.
7. Press the Menu Control Dial ❼ to confirm your setting.
8. To exit the menu, select and confirm the 'Back' option or wait 8 seconds.

Note The colour setting is only applicable when rear AUX/DVD operation is selected.

STARTUP SCREEN ON/OFF (CALAIS, CALAIS-V)

You can choose whether the startup screen should be displayed or not.

1. Access the Option menu by pressing the Menu Control Dial ❼ when the audio system is switched on.
2. Highlight the menu item 'Welcome' by turning the Menu Control Dial ❼ clockwise.
3. Press the Menu Control Dial ❼.
4. Turn the Menu Control Dial either anticlockwise or clockwise to choose between On or Off.
5. Press the Menu Control Dial ❼ to confirm your setting.
6. To exit the menu, select and confirm the 'Exit' option or wait 8 seconds.

TELEPHONE (ALL UNITS)

This audio system includes an additional telephone facility, as well as the Bluetooth® phone interface on some models. Refer to *Bluetooth*® in chapter 1A. The telephone connection point in the vehicle's wiring contains circuits that run directly to the audio system. If a mobile phone hands-free kit with suitable features (such as a mute line and wiring for a separate speaker) has been connected to it, the sound of the audio system will be muted when the phone rings and the voice of the caller will be heard through the vehicle's speakers. When the call ends, the audio system will return to the previous mode.

During a call 'VOICE IN' will be shown on the display.

If the audio system is off, it will turn on for the telephone call if the vehicle's accessories or ignition is already switched on.

If a call is in progress when the accessories are turned off, the audio system will remain turned on in Telephone mode until the phone call is completed.

For fitment of your hands free kit, contact your Holden Dealer.

IMPORTANT

When this feature is used for the first time, the volume may need to be adjusted to the phone as well as to the audio system. This should be done while a call is made. Firstly, adjust the phone's volume to a medium level using the volume control on the phone itself, then adjust the audio system's volume to a comfortable listening level. The audio system's volume may now be adjusted as required to compensate for variations in the mobile phone signal quality or changes in the background noise within the vehicle, e.g. if the window is open.

Note If the call sounds unusually distorted, the volume setting on the phone itself may need to be adjusted until the sound quality is improved.

Please contact your Holden Dealer for further information.

ANTENNA INFORMATION (ALL UNITS)

Fixed mast antenna

To remove the roof antenna, rotate it anticlockwise. To install the roof antenna, rotate it clockwise.

WARNING

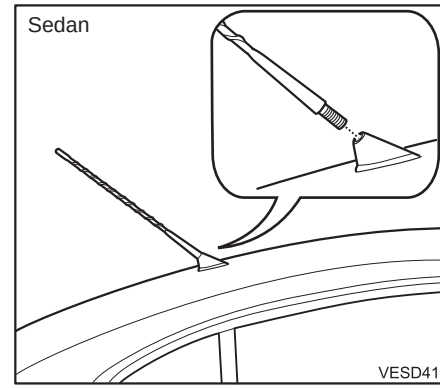
Driving through an automatic vehicle wash with the antenna installed may result in damage to the antenna or the roof panel. Be sure to remove the antenna before entering an automatic car wash.

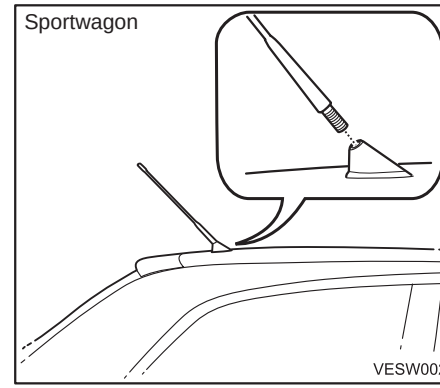
Diversity antenna*

The diversity antenna improves FM reception under multipath conditions and is an integral part of the rear window assembly. The thin conductors that form the antenna are laid on the inside of the rear window glass in the same manner as the heated rear window elements.

The radio receives signals from both the diversity antenna system and the conventional antenna. Internal circuitry within the radio decides which antenna is located in the cleaner signal area. It then uses that antenna for its radio reception.

When the vehicle is in motion the radio constantly monitors the inputs from both antennas and swaps between them in order to maintain the best possible radio reception.



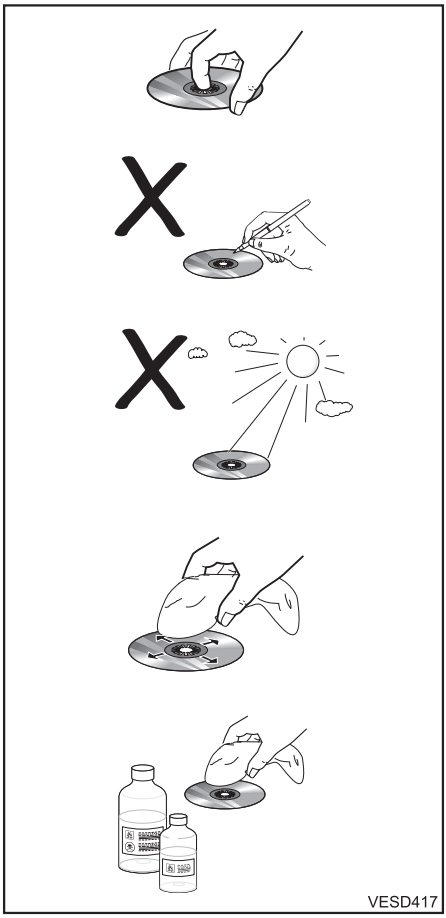


Note

- Due to the internal circuitry of the radio receiver, if the roof mounted antenna is faulty or disconnected, the radio may not use the diversity antenna system for the radio reception.
- The diversity antenna elements in the rear window are similar to those used in the demister pattern and a similar amount of care must be taken when cleaning the inside of the rear window.
- Other antennas, such as mobile phone antennas, should not be placed directly over the diversity antenna pattern, as they may cause interference or blocking of the signal from the diversity antenna.
- Window tinting is not recommended on rear windows with a diversity antenna. Metallic based tint material significantly reduces radio reception in both the AM and FM bands, and dye-based tint material reduces reception in the FM band.
- If the received signal at both antennas is of poor quality, improvement cannot be expected.

NOTES ON COMPACT DISCS (ALL UNITS)

- Handle the CD by its edge and avoid touching the playing surface.
- Do not stick paper labels, tape, etc., and do not write on either surface.
- Do not expose the CD to direct sunlight or a heat source such as a hot air duct for longer periods.
- Before inserting a CD into the player, check the playing surface and clean it with a suitable cleaning cloth. Wipe the CD from the centre outwards, rather than in a circular motion. See opposite diagram.
- Do not use solvents such as petrol, thinners, etc. Use commercially available CD cleaners.



NOTES

CHAPTER 1C

Rear seat entertainment*

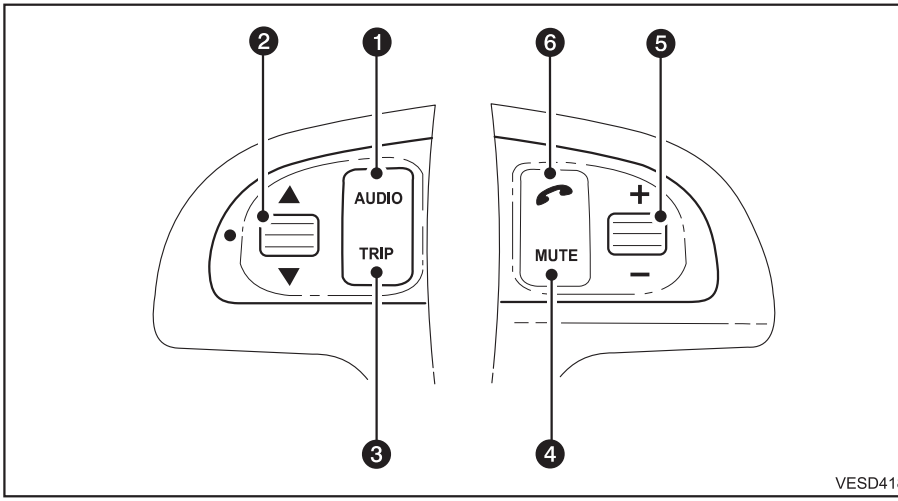
Page

Overview – controls 1C-2
Headphones 1C-6
Important information..... 1C-7
DVD player operation 1C-8
Audio/video input 1C-22

*The asterisk signifies equipment options not in all vehicles, model variants, engine options, optional equipment and Genuine Holden Accessories (and Parts).

OVERVIEW – CONTROLS

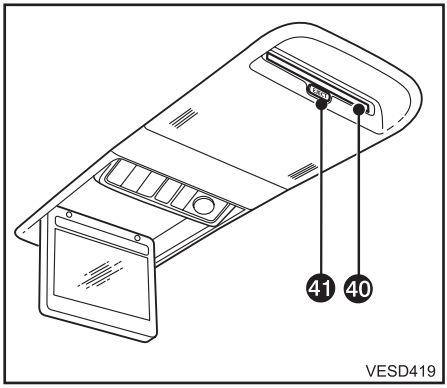
STEERING WHEEL REMOTE CONTROLS (ALL UNITS)

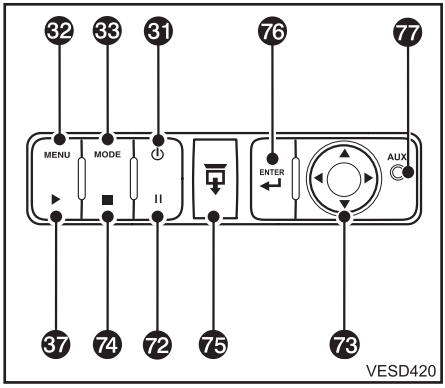


OVERVIEW – CONTROLS cont.

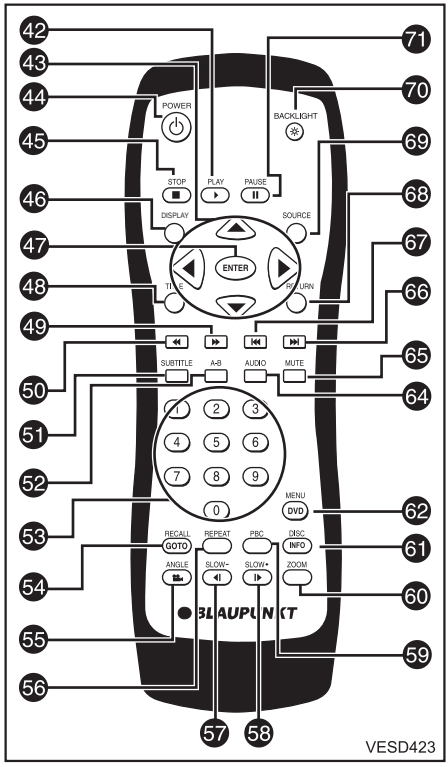
DVD PLAYER CONTROLS

Calais-V (optional on SV6, SS, SS-V, Berlina, Calais)



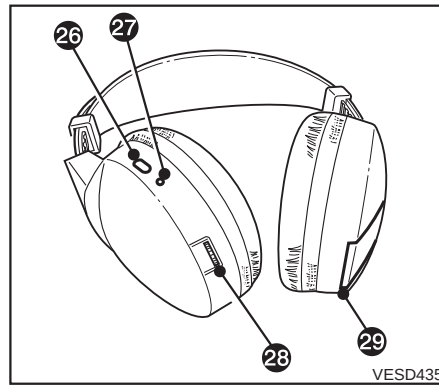


DVD REMOTE CONTROL



OVERVIEW – CONTROLS cont.

INFRARED HEADPHONES



OVERVIEW – CONTROLS cont.

AUDIO CONTROLS

Refer to chapter 1B, for overview of controls.

STEERING WHEEL REMOTE CONTROLS

Refer to chapter 1B, for overview of controls.

HEADPHONES

Infrared Headphones

26 On/Off Button.
27 Power Indicator Light.
28 Volume Control Dial.
29 Battery Cover.

DVD PLAYER CONTROLS

31 DVD Power On/Off Button.
32 To enter the DVD Menu.
33 To select the DVD/AUX Source.
37 DVD play button.
40 CD slot.
41 Eject Button.
72 DVD Pause Button.
73 DVD Multi Function Directional Control.
74 DVD Stop Button.
75 Screen Release Button.
76 Enter Button.
77 Audio/video input socket.

DVD REMOTE CONTROLS

42 DVD Play Button.
43 Menu Navigation Buttons.
44 DVD Power On/Off Button.
45 DVD Stop Button.
46 Display Menu Button.
47 Menu Enter/Select Button.
48 DVD Title Menu Button.
49 Fast Forward Button.
50 Fast Reverse Button.
51 DVD Subtitle Select Button.
52 A-B Repeat Select Button.
53 Numeric Keypad.
54 GOTO Button.
55 DVD Angle Select Button.
56 Repeat Button.
57 Slow Reverse Button.
58 Slow Forward Button.
59 VCD PBC On/Off Button.
60 DVD Zoom Select Button.
61 DVD Information Button.
62 DVD Main Menu Button.
64 DVD Audio Select Button.
65 Audio Mute Button.
66 Next Track/Chapter Button.
67 Previous Track/Chapter Button.
68 Return Menu Button.
69 DVD/AUX Source Select Button.
70 DVD Remote Control Illumination Button.
71 DVD Pause Button.

HEADPHONES

To use infrared headphones, turn on using the ON/OFF button ㉖ on the ear speaker. The red Power indicator ㉗ turns on. Adjust the volume to suit using the volume control ㉘ on the ear speaker.

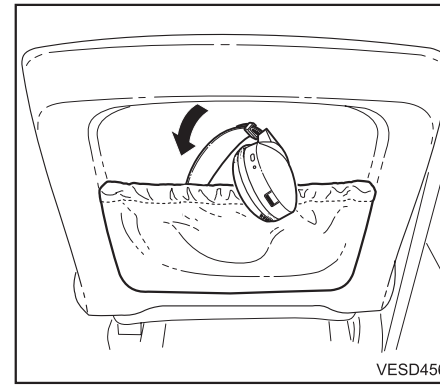
Ensure the headphones are placed on your head with the red indicator facing to the rear or performance may be affected.

Direct sunlight, very bright light or low battery may affect performance. Objects blocking the line of sight between the screen and the headphones may also affect performance.

If the headphones don't receive a signal for about 20 seconds, they will turn off automatically.

If the indicator does not turn on or poor sound quality is experienced, the batteries may need to be replaced. Refer to *Battery Replacement* further on in this chapter.

Note To protect the headphones, it is recommended they be stored in one of the front seat back pockets.



IMPORTANT INFORMATION

NOTES ON REAR SEAT ENTERTAINMENT OPERATION

- Do not apply any form of cleaning solution (e.g. Armarol) to the rear seat entertainment display, as this may cause damage to the display, and void the warranty.
- Do not insert CDs or DVDs that have labels attached. Labels can come off and damage the DVD mechanism.
- Do not insert anything other than CDs or DVDs into the DVD player (no foreign objects) as this could cause damage to the DVD mechanism. If foreign objects are found in the DVD mechanism then warranty will be void.

Note

- Excessively scratched or dirty/dusty DVDs or CDs may not play correctly.
- Under direct sunlight the display may become difficult to read.

Maintenance

Wipe the unit with a clean, dry cloth. Don't used alcohol, thinner, benzene or any cleaning fluid on the unit.

DVD PLAYER OPERATION

DVD Player

The DVD player allows you to play Digital Versatile Disc's (DVDs), which may be viewed on the Video Screen.

The DVD player is located in the roof pod. The DVD player can be controlled by the buttons on the DVD player or by the buttons on the DVD remote control.

IMPORTANT

1. **The DVD player is for rear seat passengers only. The driver cannot safely view the Video Screen while driving and should not try to do so.**
2. **Prolonged use of the DVD system while the engine is not running can drain the vehicle battery and may prevent the engine from starting.**

Video Screen

The Video Screen is located on the DVD player in the roof pod.

The Video Screen contains the infrared receiver for the DVD remote control and the infrared transmitter for the wireless headphones.

To lower the Video Screen in the roof pod, press button ❼❺ to release the screen, then pull down fully. To return the screen to the stored position, push up until it locks in place.

The DVD control panel in the roof pod contains the socket for the 3.5 mm type AV aux-in plug.

Avoid directly touching the Video Screen, as damage may occur. To clean the Video Screen, wipe with a soft cloth that is damp with water.

DVD REMOTE CONTROL

To use the DVD remote control, aim it at the Video Screen and press the desired button.

Direct sunlight or very bright light may affect the ability of the DVD system to receive signals from the DVD remote control. If the DVD remote control does not seem be working, the batteries may need to be replaced. See *Battery Replacement* further on in this chapter.

Objects blocking the line of sight may also affect the function of the DVD remote control.

To light up all buttons on the DVD remote control, press the **BACKLIGHT** button ❼❿. The button illumination will automatically turn off after a short period of time.

DVD PLAYER OPERATION cont.

Battery Replacement

To change the batteries in the DVD remote control or the headphones, do the following:

1. Remove the battery compartment door located on the back of the DVD remote control or the speaker of the headphones.
2. Replace the two AAA batteries in the compartment. Make sure that they are installed correctly.
3. Close the battery door securely.

Note Do not store the DVD remote control or the headphones in heat or direct sunlight. This could damage the DVD remote control or the headphones and it may not be covered by your vehicle's warranty.

If the DVD remote control or the headphones are to be stored for a long period of time, remove the batteries and keep them in a cool, dry place.

PLAYABLE DISC TYPES

Type of discs can be played:

- DVD Video, DVD-R/RW
- Video CD (VCD)
- SVCD
- CD-DA, CD-R, CD-RW (playback cannot be guaranteed because of the disc characteristics or recording condition.)
- MP3
- JPEG

Note The maximum number of files (MP3 and JPEG or a mix of both) per disc is 1000. The maximum number of folders per disc is 99 and the maximum number of sub folders is 10. If these are exceeded, the MP3 or JPEG, may not play.

The DVD player will only play DVDs of the appropriate DVD zone/region code for the country that the vehicle was sold in.

The DVD zone/region code is printed on the jacket of most DVDs.

DVD Region Code (Zone)	Zone/Region
1	United States, Canada.
2	Japan, Europe, South Africa, and Middle East (including Egypt).
3	South East Asia and East Asia (including Hong Kong).
4	Australia, New Zealand, Pacific Islands, Central, America, Mexico, South America, and the Caribbean.
5	Eastern Europe (Former Soviet Union), Indian subcontinent, Africa, North Korea, and Mongolia.
6	China.

DVD PLAYER OPERATION cont.

LOADING A DVD

To load a DVD into the DVD player, gently insert it with the label facing upward into the DVD load/remove slot ㊵ until the mechanism pulls it inside. While the disc is loading, disc-rotating animation will appear in the top left-hand corner of the Video Screen.

EJECTING A DVD

To remove a DVD from the DVD player, press the DVD **EJECT** button ㊶.

Note If a disc is ejected from the player, but is not removed, the DVD player will reload the disc within 10 to 15 seconds. The disc will then be stored in the DVD player to protect the disc from accidental damage. The DVD player will not resume play of this disc automatically if it is in Auxiliary mode.

TURNING REAR SCREEN ON

Turn the rear screen on by pressing the ON/OFF button ㉛ on the DVD player Controls or button ㊹ on the DVD remote control.

The screen always returns to OFF after the ignition is turned off and the audio system shuts down. The screen needs to be turned on again to resume operation.

Note The screen and player turn on together.

LISTENING TO THE DVD SOURCE THROUGH THE SPEAKERS

1. Turn the audio system on by pressing the ON/OFF button on the audio system.
2. Select the DVD mode by pressing the AUX button on the audio system or by pressing the AUDIO button ❶ on the steering wheel remote control until the DVD mode is selected.

Note The Rear Aux must be Enabled in the audio system menu to be able to listen to the DVD through the speakers. Refer to *AUX operation* in chapter 1B.

DVD PLAYER OPERATION cont.

LISTENING TO THE DVD SOURCE WITH HEADPHONES

When the screen is on, the Infrared headphone signal is transmitted. Refer to *Headphones* previously in this chapter.

PLAYING A DVD

Press the **PLAY** button ㊲ on the DVD player controls or the **PLAY** button ㊷ on the DVD remote control to start the DVD playback.

Note Some DVDs will not allow you to fast forward or skip the copyright or previews. Some DVDs will begin playing after the previews have finished. If the DVD does not begin to play the main title, refer to the on-screen instructions, as the DVD may be displaying its main title menu.

STOPPING DVD PLAYBACK

To stop the DVD playback, press and release the **STOP** button ㊺ on the DVD remote control, or button ㊹ on the DVD player.

Resume Playback

Press the **PLAY** button ㊲ on the DVD player controls or the **PLAY** button ㊷ on the DVD remote control to start the DVD playback.

As long as the DVD disc has not been ejected and the **STOP** button ㊺ on the DVD remote control has not been pressed twice, the movie will resume play from where it was last stopped. If the disc has been ejected, or if the stop button has been pressed twice, the disc will resume play at the beginning.

Pausing a DVD

To pause a DVD while playing, press the **PAUSE** button ㉜ on the DVD player or the **PAUSE** button ㉛ on the DVD remote control.

To continue playing the DVD, press the **PAUSE** button ㉜ again or the **PLAY** button ㊷ on the DVD remote control.

DVD PLAYER OPERATION cont.

Chapter/Track/Time Selection

While an audio CD is comprised of “tracks” and a VCD disc is comprised of “chapters”, a DVD is comprised of “titles”. Each title may be sub-divided into “chapters”.

You can select a desired chapter or time on a DVD by:

- Pressing the **GOTO** button ㊹ on the DVD remote control, once for chapter/track - selection. Press the **GOTO** button ㊹ again for time selection. The Video Screen will show the selection mode accordingly.
- During chapter/track selection, use the numeric keypad ㊸ on the DVD remote control to enter the desired chapter/track number and confirm by pressing the **ENTER** button ㊼ on the DVD remote control.
- During time selection, use the numeric keypad ㊸ on the DVD remote control to enter the desired time and confirm by pressing the **ENTER** button ㊼ on the DVD remote control.

Note

- To reset the number, press the **GOTO** button ㊹ on the DVD remote control once again.
- If the chapter/track number or the time keyed in exceeds the disc’s limit, an invalid symbol 🚫 will appear on the Video Screen. The selection will not be executed.
- For CD/VCDs, there are only time selection functions when the **GOTO** button ㊹ is pressed, on the DVD remote control. Press the numeric keypad on the DVD remote control to go to the desired chapter/track selection.

PREVIOUS/NEXT

To skip to the previous or the next chapter/track:

- Press the ⏮ (Previous) Track/Chapter button ㊼ or ⏭ (Next) Track/Chapter button ㊻ on the DVD remote control.
- Press the ▼ (Previous) Track/Chapter button ㊸ or ▲ (Next) Track/Chapter button ㊸ on the DVD player.

Note Pressing the ▲ **(**Next**)** button at the last track/chapter of the disc will stop the DVD playback, and return to the DVD menu.

FAST FORWARD/FAST BACKWARD

To rapidly move backwards or forwards within the current chapter:

- Press the ◀◀ button ㊿ or the ▶▶button ㊾ on the DVD remote control.
- Press the ◄ button ㊸ or the ► button ㊸ on the DVD player control.

Pressing the same buttons again will increase the speed in the order of 2X → 4X → 8X → 16X → back to normal speed. To resume playback at normal speed, press the same button repeatedly until playback speed returns normal, or press the **PLAY** button on the DVD player ㊲ or the DVD remote control ㊷.

Note When fast forward to the end of the current chapter, the next chapter will playback at the normal speed. When fast reverse to the beginning of the current chapter, the current chapter will playback at the normal speed.

DVD PLAYER OPERATION cont.

Slow Forward/Slow Backward

To slowly move backwards or forwards within the current chapter, press the **SLOW-** button ⑤⑦ or **SLOW+** button ⑤⑧ on the DVD remote control. Pressing the same button again will reduce the speed in the order of 1/8X → 1/4X → 1/2X → back to normal speed. To resume playback at normal speed, press the **SLOW-** button ⑤⑦ or **SLOW+** button ⑤⑧ repeatedly until playback speed returns to normal, or press the **PLAY** button on the DVD player ③⑦ or the DVD remote control ④②.

Note The Slow Backward function is available in DVD mode only, whereas Slow Forward is for both DVD and VCD modes.

Zoom the VCD/DVD playback picture

This function is only available in DVD and VCD playback modes.

To select different zoom ratios, press the **ZOOM** button ⑥⓪ on the DVD remote control once or several times. Zoom ratios will change in the order of 1.5x → 2x → 3x → back to normal.

A - B playback

To set two points of a track/chapter for repeating playback:

- Press the **A-B** button ⑤② on the DVD remote control for the first time will set the first point., Pressing the **A-B** button ⑤② again will set the second point of the movie. After setting points A and B, the movie will play repeatedly between points A and B.
- To cancel this function and return the movie to normal operation, press the **A-B** button ⑤② again.
- Press the **RETURN** button ⑥⑧ on the DVD remote control to cancel the first point if it was wrongly set. However, pressing the **RETURN** button while A-B mode is running will not cancel the function.

DVD PLAYER OPERATION cont.

Repeat

To repeat CD/VCD/DVD/MP3 playback, press the **REPEAT** button ㊻ button on the DVD remote control once or as many times to activate the required repeat mode.

- If the disc media is VCD (and PBC is off) or audio CD, the function will execute as follows:

Press the **REPEAT**	Mode/Display	Description
For the 1st time	REPEAT ONE	Repeat the current chapter
For the 2nd time	REPEAT ALL	Repeat this disc
For the 3rd time	REPEAT OFF	To turn off this function

- If the disc media is a DVD, the function will execute as follows:

Press the **REPEAT**	Mode/Display	Description
For the 1st time	CHAPTER REPEAT ON	Repeat the current chapter
For the 2nd time	TITLE REPEAT ON	Repeat the current title
For the 3rd time	REPEAT OFF	To turn off this function

- If the disc media is MP3, the function will execute as follows:

Press the **REPEAT**	Mode/Display	Description
For the 1st time	REPEAT ONE	Repeat the current track/files
For the 2nd time	FOLDER REPEAT	Repeat all tracks/files of the current folder
For the 3rd time	DISC	To play all tracks/files in this disc once then stop
For the 4th time	DISC REPEAT	Repeat all track/files in this disc
For the 5th time	DISC SCAN	To play the first 10 seconds of all tracks/files in the disc
For the 6th time	SINGLE	To play the current track/file once then stop
For the 7th time	REPEAT OFF	To turn off repeat function

DVD PLAYER OPERATION cont.

PBC On/Off in VCD playback

This function is only available during playback of a VCD 2.0 formatted disc. To turn **PBC** on or off, press the **PBC** button ⑲ on the DVD remote control.

- When PBC is On, the VCD will not immediately execute play mode.

  You must press the **PLAY** button ㊲ on the DVD player or the **PLAY** button ㊷ on the DVD remote control or the **ENTER** button ㊼ on the DVD remote control, to play the DVD disc. Alternately, press the numeric buttons ㊸ on the DVD remote control followed by the **ENTER** button ㊼ on the DVD remote control to play the desired chapter.
- When PBC is on, and the disc is playing, pressing the **DVD MENU** button ㊷ on the DVD remote control to go to the catalogue list menu.
- When PBC is off, you can immediately execute play mode but it will play one chapter after another in the ascending order. No chapter selection is allowed.

Note This function is VCD dependent.

MP3 Menu in MP3 Playback

This MP3 Menu is only available while playing an MP3 disc.

- The MP3 Menu shows the folders list on the left-hand side and the files and/or folders list on the right-hand side.
- To select a folder or a file, use the menu navigation buttons ㊸ on the DVD remote control to highlight the desired folder or files in the smart menu, and confirm the selection by pressing the **ENTER** button ㊼ on the DVD remote control.
- The menu can also be navigated using the DVD player control ㉝.
- You may select a folder or a file directly by pressing the numeric button ㊸ on the DVD remote control corresponding to the number displayed beside the folder or the file.
- During MP3 stop mode, press the **Previous** button ㊼ or the **Next** button ㊻ on the DVD remote control to view the previous or the next 8 items.
- During MP3 playback, press the **Previous** button ㊼ or the **Next** button ㊻ on the DVD remote control to play the previous or the next MP3 file.

DVD PLAYER OPERATION cont.

Error messages from the DVD player

In some cases, the DVD player may have trouble playing, loading or ejecting DVDs. If this happens, one of the following error messages may be displayed on the Video Screen:

1. 'Disc Error': This message will be displayed if a disc is inserted upside down, if the disc is not able to be read or if the disc format is not compatible with the DVD player, or the DVD player can't play the disc. Severely damaged discs will cause this error.
2. 'Load/Eject Error': This message will be displayed if the disc is not properly loaded or ejected.
3. 'Region Code Error': This message will be displayed if the region code of the DVD is not compatible with the DVD player.
4. 'No Disc': This message will be displayed if the PLAY button is pressed and no disc is in the player.
5. 'SECURITY ERROR': This message will be displayed on the screen if the user tries to turn on the security locked DVD player. Refer to your Holden Dealer.
6. 'DTS NOT SUPPORT': This message will be displayed if the 'DTS' audio mode is selected. Please select other audio mode.

DVD PLAYER OPERATION cont.

On-Screen Menus

The system provides several on-screen menus, which may be used to select preferences or make adjustments.

The on-screen display will automatically time out after a few seconds.

Navigation and Adjustment of preferences in these menus can be done by:

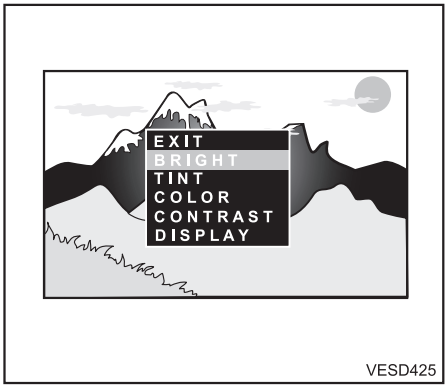
- Using the navigation buttons ㊸ and the Enter button ㊼ on the DVD Remote control.
- Using the navigation buttons ㊼ and the Enter button ㊻ on the DVD player controls.

Display Menu

The display menu can be used to modify various Video Screen display characteristics such as brightness, tint, colour and contrast.

To access the display menu, press the **DISPLAY** button ㊻ on the DVD remote control or press the **MENU** button ㉜ and then press the **ENTER** button ㊻ to select **Display Settings**.

The display (see opposite) will appear on the Video Screen, once the display settings is selected.



VESD425

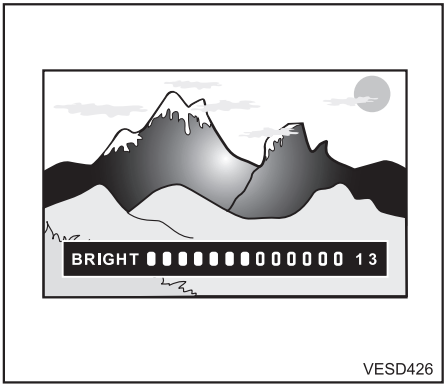
To Adjust Brightness

To adjust the brightness of the screen, use the menu navigation buttons ㊸ on the DVD remote control to highlight 'BRIGHT' in the display menu. Press the **ENTER** button ㊼ on the DVD remote control, and the display (see opposite) will appear on the Video Screen.

Press the **LEFT** or **RIGHT** direction buttons ㊸ on the DVD remote control to adjust the brightness of the Video Screen.

Pressing the **RIGHT** button increases the brightness, while pressing the **LEFT** button decreases the brightness.

The Video Screen brightness will adjust as the buttons are pressed. When the desired brightness is achieved, press the **ENTER** button ㊼ on the DVD remote control, or allow the on-screen display to time out.



VESD426

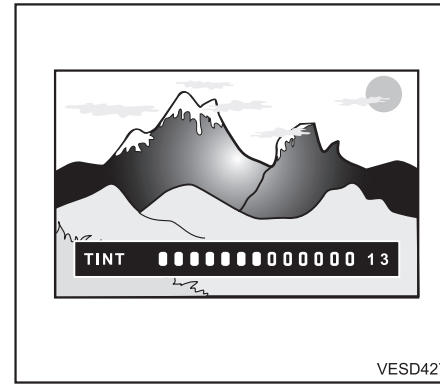
DVD PLAYER OPERATION cont.

To Adjust Tint

To adjust the tint (red or green bias) of the screen, use the menu navigation buttons ㊸ on the DVD remote control to highlight 'TINT' in the display menu. Press the **ENTER** button ㊼ on the DVD remote control, and the display (see opposite) will appear on the Video Screen.

Press the **LEFT** or **RIGHT** direction buttons ㊸ on the DVD remote control to adjust the tint of the Video Screen. Pressing the **RIGHT** button increases the tint (decreases the green bias), while pressing the **LEFT** button decreases the tint (increases the green bias).

The Video Screen tint will adjust as the buttons are pressed. When the desired tint is achieved, press the **ENTER** button ㊼ on the DVD remote control, or allow the on-screen display to time out.



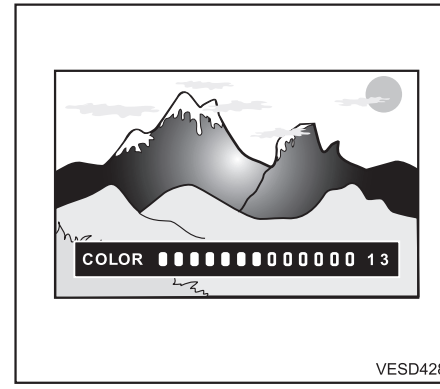
VESD427

To Adjust Colour

To adjust the colour of the screen, use the menu navigation buttons ㊸ on the DVD remote control to highlight 'COLOUR' in the display menu. Press the **ENTER** button ㊼ on the DVD remote control, and the display (see opposite) will appear on the Video Screen.

Press the **LEFT** or **RIGHT** direction buttons ㊸ on the DVD remote control to adjust the colour of the Video Screen. Pressing the **RIGHT** button increases the colour (red), while pressing the **LEFT** button decreases the colour.

The Video Screen colour will adjust as the buttons are pressed. When the desired colour is achieved, press the **ENTER** button ㊼ on the DVD remote control, or allow the on-screen display to time out.



VESD428

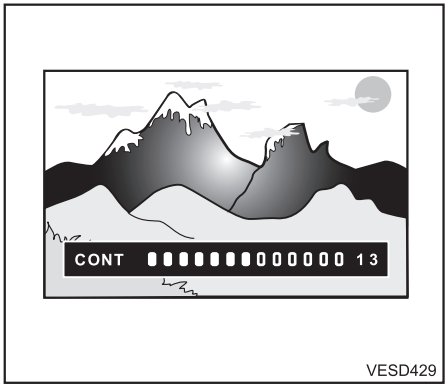
DVD PLAYER OPERATION cont.

To Adjust Contrast

To adjust the contrast of the screen, use the menu navigation buttons ㊸ on the DVD remote control to highlight 'CONTRAST' in the display menu. Press the **ENTER** button ㊼ on the DVD remote control, and the display (see opposite) will appear on the Video Screen.

Press the **LEFT** or **RIGHT** direction buttons ㊸ on the DVD remote control to adjust the contrast of the Video Screen. Pressing the **RIGHT** button increases the contrast, while pressing the **LEFT** button decreases the contrast.

The Video Screen contrast will adjust as the buttons are pressed. When the desired contrast is achieved, press the **ENTER** button ㊼ on the DVD remote control, or allow the on-screen display to time out.



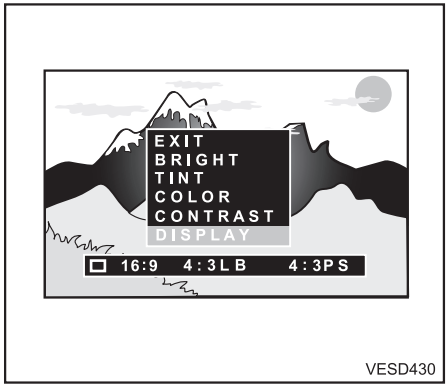
VESD429

To Adjust Display Mode

DVD movies may be recorded in various formats (e.g. 16:9, 4:3 P/S, 4:3 L/B). The video display may be adjusted to achieve the preferred appearance.

To adjust the display mode of the screen, use the menu navigation buttons ㊸ on the DVD remote control to highlight 'DISPLAY' in the display menu. Press the **ENTER** button ㊼ on the DVD remote control, and the display (see opposite) will appear on the Video Screen.

Press the **LEFT** or **RIGHT** direction buttons ㊸ on the DVD remote control to adjust the display mode of the Video Screen. Scroll through the three available display mode options of 16:9, 4:3 L/B or 4:3 P/S.



VESD430

The Video Screen display mode will adjust as the buttons are pressed. When the desired display mode is achieved, press the **ENTER** button ㊼ on the DVD remote control, or allow the on-screen display to time out.

DVD INFORMATION

Information on the playing disc (DVD, CD, MP3 or VCD) may be viewed on the Video Screen by pressing the **DVD INFO** button ㊶ on the DVD remote control.

To clear the Track/Chapter information from the Video Screen, press the **DVD INFO** button ㊶ on the DVD remote control repeatedly until the information disappear from Video Screen.

DVD PLAYER OPERATION cont.

ADVANCED DVD VIDEO FEATURES

Invalid Operation Icon

Some functions will not be available with some DVDs or at certain times during playback. If a button is pressed for a function that is not supported by the DVD, the invalid operation icon displayed on the Video Screen.

DVD Title Menu

Some DVDs may contain more than one 'Title' and may have a 'Title' menu that lists all of the titles on the disc. In this case, the title menu may be viewed on the Video Screen by pressing the **TITLE** Button 48 on the DVD remote control.

If the symbol appears on the Video Screen after pressing the **TITLE** button, the disc does not have a title menu.

DVD Menu

DVDs generally have their own menus which show the disc contents, language and subtitle options, artist information and additional features.

To access the DVD menu, press the **DVD MENU** button 62 on the DVD remote control. The DVD menu will appear on the Video Screen. Use the menu navigation buttons 43 on the DVD remote control to highlight a desired item. Press the **ENTER** button 47 on the DVD remote control to select the item.

To exit the current menu and return to the previous screen, press the **RETURN** button 68 on the DVD remote control again.

Alternatively, to access the DVD menu using the DVD player controls, press the MENU button 82 and press the DOWN button 73 to highlight the **Disc Menu**. Press **ENTER** button 76. Then, use the navigation buttons 73 to highlight a desired item. Press the **ENTER** button 76 to select the item.

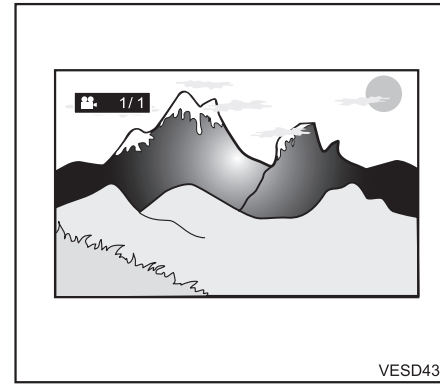
If the symbol appears on the Video Screen after pressing the **DVD MENU** button, the disc does not have a DVD menu.

Selecting a scene angle from the DVD Video

A variety of scene angles may be selected if the DVD contains 'multi-angle' scenes, where multiple cameras were used to shoot the same scene from different angles.

To select a scene angle, press the **ANGLE** button 55 on the DVD remote control. The display (see opposite) will appear on the Video Screen.

Press the **ANGLE** button 55 repeatedly until the desired angle is selected. Each press of the **ANGLE** button will advance the angle number. The on-screen display will automatically time out after a few seconds.



DVD PLAYER OPERATION cont.

Subtitles Selection

DVDs can contain subtitle options. The subtitles may be turned on or off, and viewed in various languages.

To change the subtitle language while a DVD is playing, press the **SUBTITLE** button ❺❶ on the DVD remote control.

Press the **SUBTITLE** button ❺❶ repeatedly until the desired subtitle language is selected. Each press of the **SUBTITLE** button will advance the subtitle number. The on-screen display will automatically time out after a few seconds.

Subtitles may be turned off by pressing the **SUBTITLE** button ❺❶ repeatedly until 'SUBTITLE OFF' appears on the Video Screen.

Audio Language Selection

DVDs may contain the audio in various languages.

To change the audio language while a DVD is playing, press the **AUDIO** button ❻❹ on the DVD remote control.

Note DTS audio mode is not supported in this DVD player, you will not hear any audio when DTS audio mode is selected.

Press the **AUDIO** button ❻❹ repeatedly until the desired audio language is selected. Each press of the **AUDIO** button will advance the audio language number. The on-screen display will automatically time out after a few seconds.

AUDIO/VIDEO INPUT

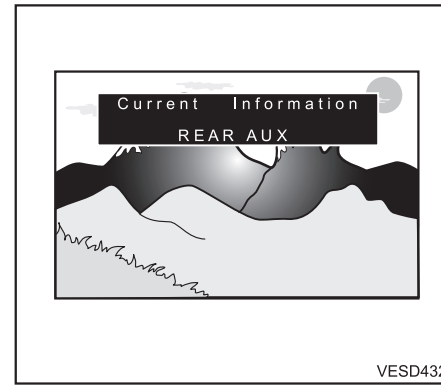
Rear Auxiliary Operation

The auxiliary input socket located in the DVD control panel in the roof pod, contains the socket for the 3.5 mm type AV aux-in plug. It allows you to connect audio and video from an auxiliary device such as a camcorder or a video game unit to the DVD player, just as you would to a standard television.

3.5 mm type AV cables are needed to connect the auxiliary device to the auxiliary input socket. Refer to the manufacturer's instructions for proper connection of your auxiliary device.

To use the auxiliary input socket on the DVD player, connect an external auxiliary device to the 3.5 mm auxiliary input socket and turn both the auxiliary device and the DVD player power on. If the DVD player was previously in the DVD player mode, you will need to press the **MODE** button on the DVD player 33 or the DVD remote control 69. The display (see opposite) will appear on the Video Screen.

Pressing the **MODE** button will toggle the Rear Seat Entertainment system between the auxiliary device and the DVD player.

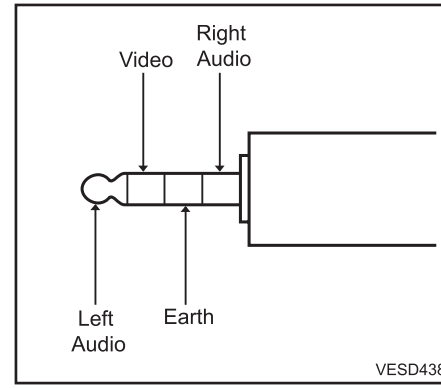


Video Format in the Auxiliary Mode

The auxiliary input video format is preset to NTSC. In some cases, the video format may be in PAL system. The DVD player will detect the video format and set the Video Screen automatically.

Note

- Several different types of auxiliary plugs exist on external devices.
- If you have problems with connecting audio and displaying video, the plug on the external source may be incompatible with the vehicle's AUX input socket.
- Use a plug of the type shown.



CHAPTER 2

Locks

Page

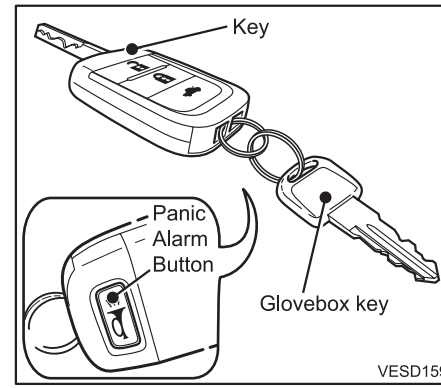
Keys....2-2
Ignition switch....2-6
Door locks....2-7
Sedan boot lock....2-11
Sportwagon tailgate lock....2-13
Bonnet lock....2-14
Security....2-15

*The asterisk signifies equipment options not in all vehicles, model variants, engine options, optional equipment and Genuine Holden Accessories (and Parts).

KEYS

KEYS

Sedan



This key operates all locks and ignition, except for the glovebox. The following buttons appear on the key.

Lock: Press the button on the key to lock the doors and to arm the alarm system.

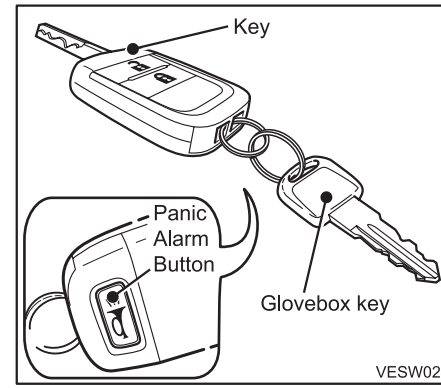
Unlock: Press the button on the key to unlock the doors and to disarm the alarm system.

Refer to *Door locks* further on in this chapter.

Boot: Press the button on the key to unlatch the boot lid.

Refer to *Boot lock* further on in this chapter.

Sportwagon



This key operates all locks and ignition, except for the glovebox. The following buttons appear on the key.

Lock: Press the button on the key to lock the doors, tailgate and to arm the alarm system.

Unlock: Press the button on the key to unlock the doors, tailgate and to disarm the alarm system.

Refer to *Door locks* and *Sportwagon tailgate lock* further on in this chapter.

Panic/vehicle locate button

The panic/vehicle locate button is operational when the ignition is switched off and the key is within vehicle range.

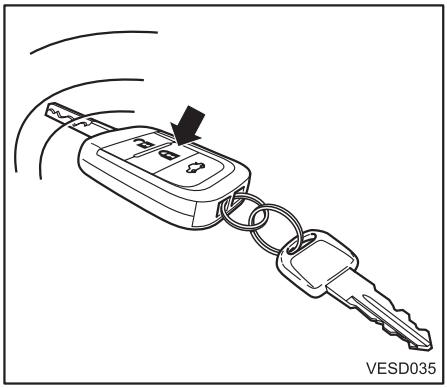
When briefly pressing the PANIC button once, the exterior lamps will flash and the horn will chirp. This will help to locate the vehicle.

In an emergency situation, press and hold the PANIC button for at least 2 seconds. The horn will sound and the turn signals will flash. This will continue to happen until the PANIC button is pressed again or the key is placed in the ignition switch and turned to the ON position.

KEYS cont.

Pressing buttons

Note When pressing the key buttons, ensure that other keys on the key ring are not between the key and the vehicle. Other keys can obscure the signal being transmitted to the vehicle. Refer to *Notes about the keys* further on in this chapter.


VESD035

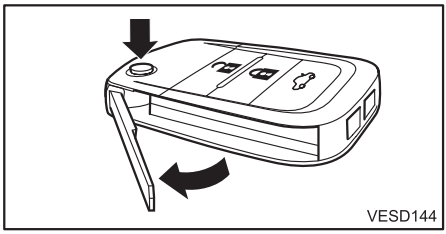
Foldaway key blade*

Press the button to extend the key blade.

To retract the key blade, press the button and fold the key section into the remote.

Note

- The key engages audibly.
- A fixed blade key is supplied as the second key.

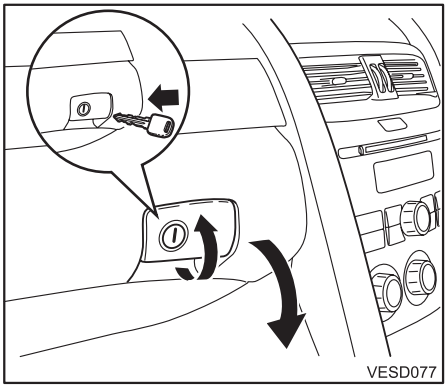

VESD144

Matching transmitter(s) to your vehicle

Each remote keyless entry transmitter is coded to prevent another transmitter from unlocking your vehicle. If a transmitter is lost or stolen, a replacement can be purchased through your Holden Dealer. Remember to bring any additional transmitters so they can also be re-coded to match the new transmitter. Once your dealer has coded the new transmitter, the lost transmitter will not unlock your vehicle.

GLOVEBOX KEY

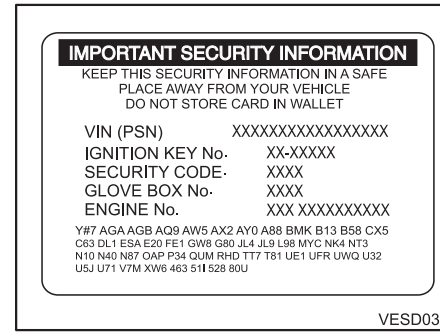
The glovebox key locks and unlocks the glovebox. When leaving the vehicle and ignition key with a car park attendant, valuables can be locked in the glovebox and the key taken with you.


VESD077

KEYS cont.

KEY NUMBERS – SECURITY CARD

The security card lists various security numbers for the vehicle, including key numbers and the audio system PIN. Please keep the card in a safe place, away from the vehicle. If a key is lost, a replacement can be ordered through any Holden Dealer by quoting the key code number, security code number and providing proof of ownership.


IMPORTANT SECURITY INFORMATION
KEEP THIS SECURITY INFORMATION IN A SAFE PLACE AWAY FROM YOUR VEHICLE DO NOT STORE CARD IN WALLET
VIN (PSN) XXXXXXXXXXXXXXXXX
IGNITION KEY No. XX-XXXXX
SECURITY CODE. XXXX
GLOVE BOX No. XXXX
ENGINE No. XXX XXXXXXXXXX
Y#7 AGA AGB AQ9 AW5 AX2 AY0 A88 BMK B13 B58 CX5 C63 DL1 ESA E20 FE1 GW8 G80 JL4 JL9 L98 MYC NK4 NT3 N10 N40 N87 OAP P34 QUM RHD TT7 T81 UE1 UFR UWQ U32 U5J U71 V7M XW6 463 511 528 80U
VESD034

PERSONAL IDENTITY KEYS*

This system stores two sets of electronic settings. The settings are stored when a personal identity key is removed from the ignition and are recalled when the button is pressed on the key. For instance, one driver may have a preferred radio station. Pressing the button on their key automatically customises the radio for that driver. However, the other driver may prefer a different station. Pressing their key button tunes the radio to their station.

The features remembered by each of the 2 memories are:

- Climate control settings.
- Radio settings.
- Trip computer settings.
- All features are personalised in the Customisation menu. Refer to *Customisation menu* in chapter 1A.

In addition, on higher luxury models, the following settings are also remembered on button activation only:

- Driver's seat adjustment.
- Exterior mirror position.
- Exterior mirror position when reverse gear is selected. Refer to *External mirror DIP* in chapter 3.

Features revert to the last setting used for each key.

Note

- Two different memories are available, 'memory one' and 'memory two'. If a third key is made, the third key becomes 'memory one' and the other two keys become identical 'memory two' keys.
- The personal settings will not be applied until the button is pressed on the key. This is when the key is identified.
- If the vehicle battery has been disconnected, some settings may be forgotten. The driver's adjustments will be remembered the next time the features are adjusted.

KEYS cont.

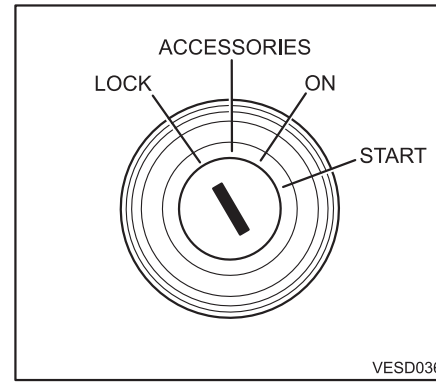
NOTES ABOUT THE KEYS

- When a button on the key is pressed, it sends a signal to the vehicle. The receiver of the signal is incorporated in the vehicle's interior.
- The remote control in the key has a range of approximately 10 metres. The range is dependent on the charge state of the key battery and on ambient conditions of the vehicle's location, the key's location and the area between them. If the key buttons do not work, change your position to the vehicle and try again. Normally, getting closer to the vehicle will solve the problem. Certain conditions also enable ranges of more than 10 metres. Take care that no button is pressed unintentionally, especially when the vehicle is out of sight.
- Tinting the vehicle windows reduces the range of the key if the tinting material has a metallic film.
- The button on the key will work with the key in the ignition in any position or with the key removed from the vehicle. If any door[1] is open when the button is pressed, the horn will chirp five times as a reminder. Check all doors[1] to ensure they are closed securely and repeat the locking procedure.
- The key buttons may not work if the vehicle is parked near strong radio activity, such as under TV towers (most likely in high lookout car parks).
- At times you may notice a decrease in range. This is normal for any remote keyless entry system. If the transmitter does not work or if you have to stand closer to your vehicle, try this:
  - Check the distance. You may be too far from your vehicle. You may need to stand closer during rainy or snowy weather.
  - Check the location. Other vehicles or objects may be blocking the signal. Take a few steps to the left or right, hold the transmitter higher, and try again.
  - If you are still having trouble, contact your Holden Dealer.
- The key has a lithium battery inside the key head which should last approximately three years with normal use. Refer to *Replace battery in remote key* in chapter 1A. Have a flat key battery replaced by your Holden Dealer.
- When, for any reason, pressing the key buttons does not work, the doors[1] can be locked and unlocked by turning the key in the driver's door lock.
  - Turn the key towards the rear of the vehicle (once) to lock all doors[1].
  - Turn the key towards the front of the vehicle once to unlock the driver's door, twice to unlock all doors[1]. As the vehicle is fitted with an alarm system, opening the door will cause activation of the alarm after a preset period of time. If this happens, insert the key into the ignition and turn to the ON position to shut off the alarm.
- Do not disassemble the keys.
- If the vehicle is delivered with only one key, notify your Holden Dealer immediately.
- Always store spare keys in a safe, dry place.
- If the key is returned to you with signs of damage, contact your Holden Dealer as soon as possible.

[1] *Includes tailgate for Sportwagon models.*

IGNITION SWITCH

IGNITION POSITIONS



WARNING

Do not switch the engine off while the vehicle is moving as there will not be any power assist for brakes or steering. Never remove the key while the vehicle is moving, as this will lock the steering.

Lock

When the key is in the LOCK position, some electrical accessories and the engine are off.

The key is inserted and removed only from the LOCK position.

To help guard against theft, the vehicle's engine is automatically disabled shortly after turning the key to the LOCK position and removing the key from the ignition switch.

In addition, the steering wheel is automatically locked when the key is removed. To release the steering lock and enable the engine, re-insert the key and turn it towards the front of the vehicle.

If having trouble turning the key to unlock the steering, turn the steering wheel slightly to the right or left while turning the key towards the front of the vehicle.

Accessories

When the key is in the ACCESSORIES position, the engine will not run. However accessories such as the audio system and wipers will still operate.

On

When the key is in the ON position, the engine is ready to start (or is already started) and all electrical systems are active.

Note The warning lamps, which are designed to illuminate at the ignition ON position, indicate the systems are working. Refer to *Warning/reminder indications* in chapter 1A.

Do not leave the switch in the ON position for a prolonged period, unless the engine is running, otherwise the vehicle's battery will discharge.

Start

The key should only be turned to the START position momentarily and then released, as the engine starts automatically. The key automatically returns to the ON position when released.

Note If the vehicle stalls after 5 seconds, return the key to the LOCK position. Slowly rotate the key to the START position. If the security warning lamp flashes, contact your Holden Dealer.

Refer to *Engine starting* in chapter 4.

DOOR LOCKS

LOCKING

Doors are locked when the lock snib is flush with the door handle. If the snib is showing red, the door is unlocked. Refer to *Door lock snibs* further on in this chapter.

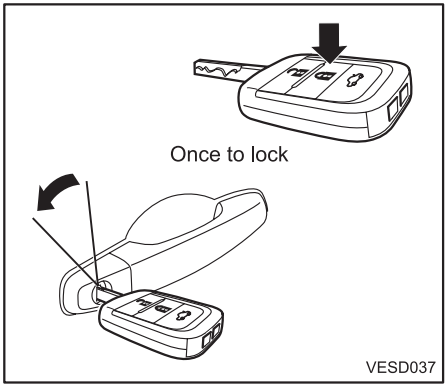
Note You can select the **Auto lock** feature which locks the doors[1] automatically when the vehicle's speed is at or above 13 km/h. On vehicles fitted with an automatic transmission, you also can select auto lock when the transmission selector is shifted out of **P** (park). Select the feature from the instrument panel Customisation menu. Refer to *Customisation menu* in chapter 1A.

Remote locking

Close all doors[1] and then press the button on the key to lock all doors[1] and arm the alarm system.

If **Flash remote lock** is selected in the Customisation menu, the vehicle's turn signals briefly flash once when the signal is received. Refer to *Customisation menu* in chapter 1A.

If unsure whether the vehicle is locked, press the button on the key again. If **Beep remote lock** is selected in the customisation menu, the horn briefly chirps when the vehicle is locked.



Note

- If any door[1] is open when the button is pressed, the horn will chirp rapidly five times as a reminder. All doors[1] will lock except the open door.
- If the driver's door is open when the button is pressed, all doors[1] will be locked but then the driver's door[1] lock and snib will be unlocked immediately.

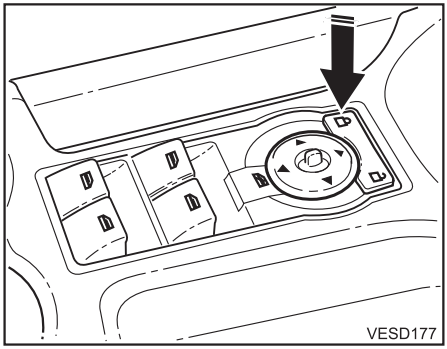
Manual locking

Insert the key in the driver's door lock and turn towards the rear of the vehicle, then turn it back to the vertical position and remove.

Note This will lock all doors[1] and arm the alarm system.

Locking from the inside

Press the side of the switch with the symbol on the centre console to lock all doors[1]. This will not arm the alarm.



If locking has not worked

Note The horn chirps rapidly five times if any door[1] is open while the button on the key is pressed.

Refer to *Notes about the keys* previously in this chapter.

[1] *Includes tailgate for Sportwagon models.*

DOOR LOCKS cont.

UNLOCKING

Doors are unlocked when the lock snib is showing red. If the snib is flush with the door handle, the door is locked. Refer to *Door lock snibs* further on in this chapter.

Note The **Auto unlock** feature can be selected. It unlocks the doors[1] automatically when the ignition is switched off. On vehicles fitted with an automatic transmission, **Auto unlock** can also be selected when the transmission selector is moved to position **P** (park). You can also choose whether the driver's door only or all doors[1] will be unlocked. Select the feature from the instrument panel Customisation menu. Refer to *Customisation menu* in chapter 1A.

Remote unlocking

Press the button to unlock the vehicle, to disarm the alarm and to switch on the interior lamp for a short time or until the ignition is switched on. The interior lamp will only come on if the switch is set to the position. Refer to *Interior (dome) lamps* in chapter 3.

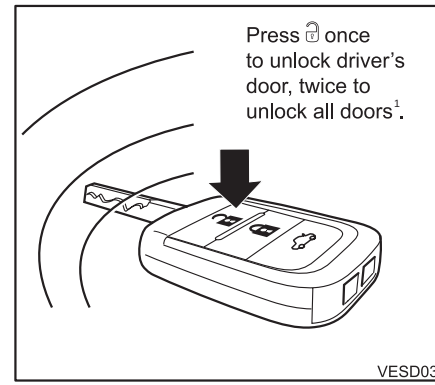
From the **Two stage unlock** feature in the Customisation menu select how the remote unlocking works:

- Press the button once to unlock the driver's door only.

  Then press the button a second time to unlock all passenger doors[1].

or

- Press the button once to unlock all doors[1].



Select **Flash remote unlock** from the Customisation menu to briefly flash the vehicle's turn signals once when the signal is received. Refer to *Customisation menu* in chapter 1A.

Manual unlocking

Insert the key into the lock of the driver's door and turn it once towards the front of the vehicle to unlock the driver's door. Turn it twice towards the front of the vehicle to unlock all doors[1].

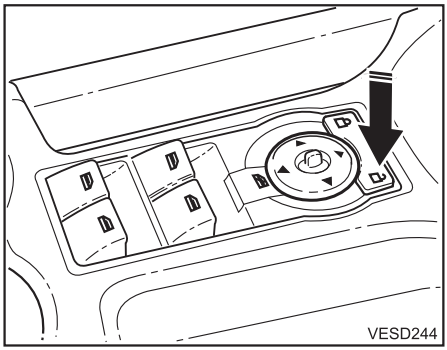
Note This will not disarm the alarm system. If the vehicle is unlocked using the key in the door lock while the alarm is armed, opening a door will activate the alarm. Refer to *Notes about the keys* previously in this chapter.

[1] *Includes tailgate for Sportwagon models.*

DOOR LOCKS cont.

Unlocking from the inside

Press the side of the switch with the symbol on the centre console to unlock all doors[1].



FREE TURNING DOOR LOCKS

The door lock cylinder is designed to free turn if it is forcefully rotated without the correct key or if the correct key is not fully inserted. To reset, turn the lock with the correct key fully inserted until its slot is vertical, remove the key and then re-insert it. If the lock still free turns, turn the key 180 degrees and repeat the procedure.

Note This feature is provided as a theft deterrent, to prevent the lock being forced open. The force required to make the key free turn, reduces each time. Do not attempt to demonstrate or test this feature. Always remember to fully insert the key when locking and unlocking the doors.

If any problems occur, contact your Holden Dealer.

[1] *Includes tailgate for Sportwagon models.*

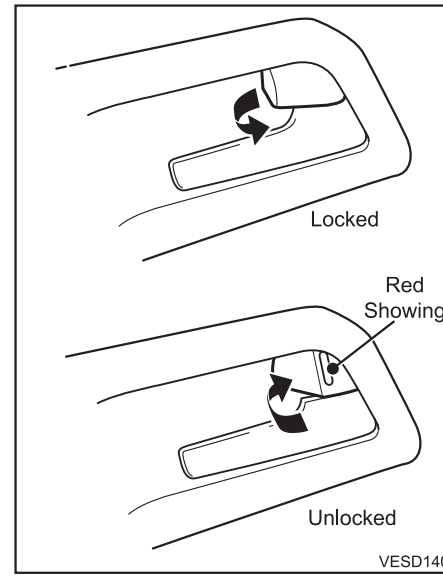
DOOR LOCKS cont.

DOOR LOCK SNIBS

How the door lock snibs work

When the door is closed, pulling the snib flush on any of the doors, locks only that door.

Note Do not operate the driver's door lock snib when the door is open.



CHILD SAFETY
REAR DOOR LOCKS

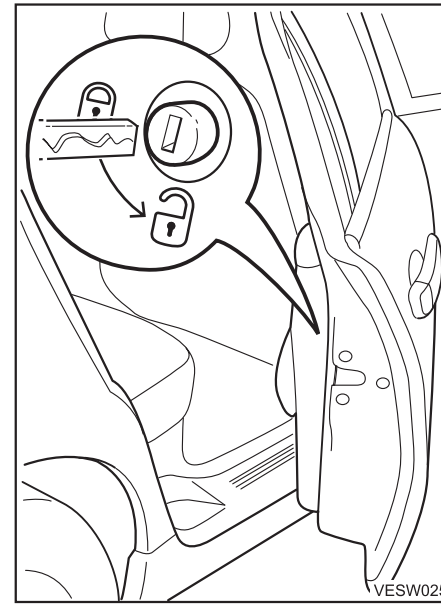
Child safety locking helps prevent rear doors being accidentally opened by small children in the vehicle.

The locks are provided on the rear edge of rear doors, accessible when the door is open.

To prevent the doors from being opened from the inside, use the ignition key to turn the switch away from the vertical position.

WARNING

For safety, always check that the lock is operating correctly (after setting) by trying to open the door from inside the vehicle.



SEDAN BOOT LOCK

UNLOCKING THE BOOT

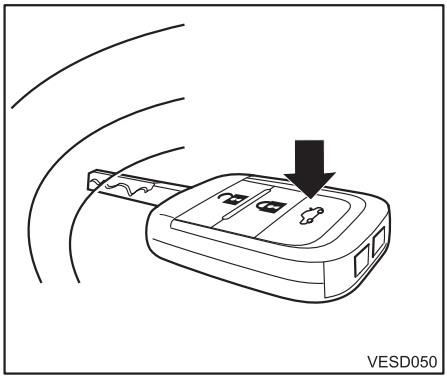
Use one of the methods shown below to unlock/open the boot. After partially opening the boot lid, gas struts automatically take over to lift and hold the boot lid in the fully open position.

Note For safety reasons, unlock/open the boot only when the vehicle is stationary. The boot locks automatically when closed, so be careful not to leave the keys in the boot, as they will be locked in.

Key button

Press and hold the button on the key to unlock/open the boot.

When the boot is unlocked/opened, it can then be fully opened from outside.



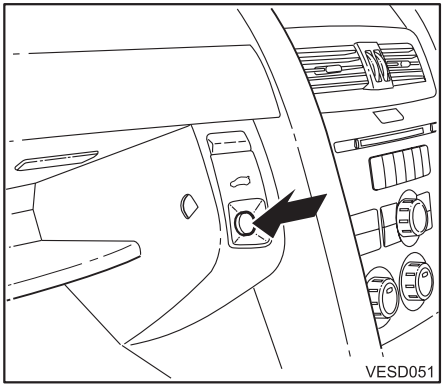
Boot release button

The boot release button is located inside the glovebox. Pressing this button will unlock/open the boot.

When the boot is unlocked/opened, it can then be fully opened from outside.

Note

- For added vehicle security, the boot release button in the glovebox is disabled when all doors are locked, the alarm is enabled or the vehicle is moving at greater than 13 km/h.
- If the boot is not closed properly when the vehicle is locked the security warning lamp will flash immediately upon locking (without the 30 second illumination period). If this happens unlock the vehicle, close the boot properly and relock the vehicle.

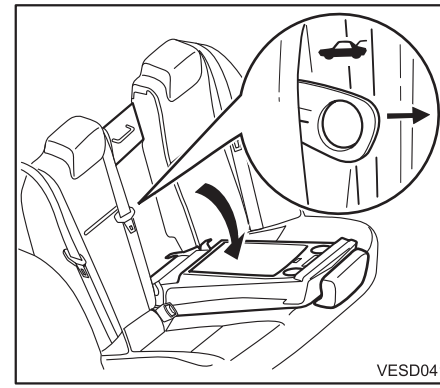


SEDAN BOOT LOCK cont.

Sedan emergency boot release

An emergency boot release is provided behind the centre of the rear seat. Press the lock button (located at the top centre of the middle seat) all the way down to unlock the seat back. Then fold it down to gain access to the release handle. Pull the release handle sideways, towards the centre of the vehicle, to open the boot.

The release handle is also visible from within the boot.



SPORTWAGON TAILGATE LOCK

WARNING

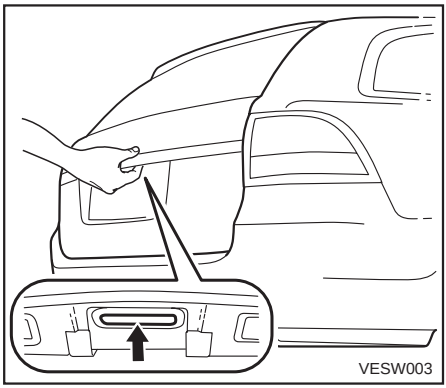
To prevent dangerous exhaust fumes entering the vehicle, close the tailgate when the engine is running. If it is necessary to leave the tailgate open (while carrying bulky cargo) close all windows, switch heater controls to 'fresh' and set fan to highest speed.

Unlocking the tailgate

Press the button to unlock all the doors and tailgate.

Note If the two stage unlock feature has been selected in the customisation menu, press the unlock button a second time.

To open the tailgate press the button below the handle. After partially opening the tailgate, gas struts automatically take over to lift and hold the tailgate in the fully open position.

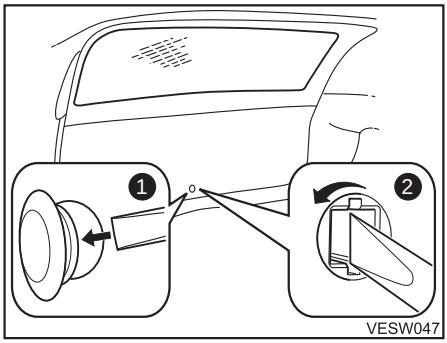


Manual tailgate release

If the battery has been disconnected or is flat, the tailgate unlock button will not operate.

To open the tailgate, access the cargo area from inside the vehicle.

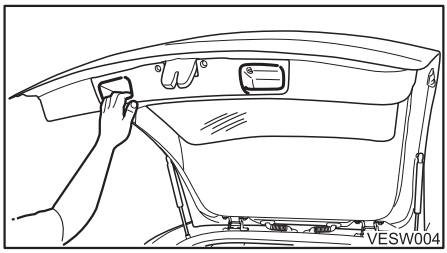
1. Using a flat-blade screwdriver, remove the rubber cover as shown in step 1.
2. Insert a flat-blade screwdriver into the hole and turn anticlockwise as shown in step 2.



Locking the tailgate

Use the handle to pull down the tailgate then close firmly. Press the button to lock all the doors and tailgate.

Note If the tailgate is not closed properly when the vehicle is locked the horn will chirp rapidly five times as a reminder. All doors will lock except the tailgate.



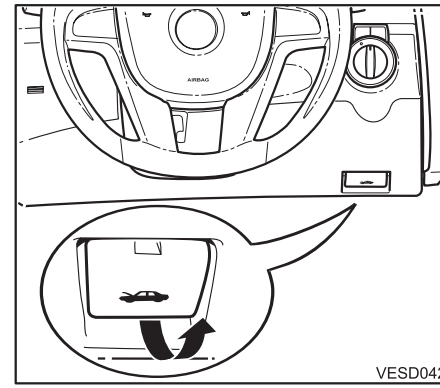
WARNING

To avoid injury and/or damage to the vehicle, check each time, before the tailgate is closed, that the contact area is unobstructed.

BONNET LOCK

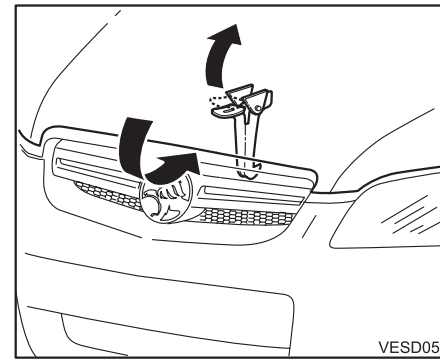
OPENING THE BONNET

From the driver's side of the vehicle, pull the lever towards you. This allows the bonnet to release but is prevented from opening by the safety catch.



To open the bonnet completely, reach under the bonnet to the passenger's side of the emblem and push up on the front edge of the release catch. Hold in this position and raise the bonnet.

After you have partially lifted the bonnet, gas struts automatically take over to lift and hold the bonnet in the fully open position.



CLOSING THE BONNET

WARNING

To avoid injury and/or damage to the vehicle, check each time, before the bonnet is closed, that the contact area is unobstructed.

Lower the bonnet until the gas struts stop, providing lifting effort and then allow it to drop. Make sure the latch engages.

WARNING

If while driving you notice that the bonnet has not been properly closed, pull the vehicle over to the side of the road at the earliest possible moment and close the bonnet correctly.

Note

- If the wiring of the bonnet switch is damaged or tampered with, it will be detected by the vehicle's control system. The alarm will be activated when the alarm system is armed.
- If the bonnet is not closed properly when the vehicle is locked the security warning lamp will flash immediately upon locking (without the 30 second illumination period). If this happens unlock the vehicle, close the bonnet properly and relock the vehicle.

SECURITY

ALARM

Arming and disarming

When the button on the key is pressed or when the vehicle is locked using the key in the driver's door lock, the alarm is armed automatically (after a short delay of approximately 30 seconds). The security warning lamp will illuminate for 30 seconds then begin flashing on the instrument panel.

The alarm system is disarmed automatically when the button on the key is pressed.

While the alarm system is armed, the boot can still be opened without activating the alarm by pressing the button on the key. Pressing the button will disarm the alarm system for the boot only. Closing the boot will rearm the alarm system for the boot after a short delay.

Note If any door is unlocked without pressing the button on the key, while the alarm system is armed, opening any door[1] will activate the alarm.

When activated

While the alarm is armed, it will be activated if any of the doors[1], boot or bonnet are opened. If activated, the alarm sounds and the turn signals flash.

To deactivate the alarm, perform one of the following:

- Press the button on the key.
- Switch on the ignition.
- Allow the alarm to time out after about 30 seconds and reset itself, to guard against further break-in attempts.

Break-in

If the button on the key is pressed and the horn chirps, an attempted break-in has occurred while the alarm system was armed.

If the alarm has been activated, the **Alarm Activated** animation appears in the centre display for about one second followed by an animation showing which trigger point has activated the alarm. If there is more than one trigger point, an animation for each of them will follow.



Each animation will be displayed for about one second before the display returns to the **Alarm Activated** animation. The animations are shown in a continuous cycle until the **TRIP** button is pressed. It then reverts to the original trip computer display.

[1] *Includes tailgate for Sportwagon models.*

SECURITY cont.

The following messages are possible depending upon the model and what has activated the alarm:

- **by Bonnet** – if the bonnet has been opened.
- **by Boot/tailgate** – if the boot has been opened (Sedan) or if the tailgate has been opened (Sportwagon).
- **by Passenger doors** – if one of the passenger doors has been opened.
- **by Driver's door** – if the driver's door has been opened.

Notes about the alarm

- The button on the key will not lock an open door[1]. The open door[1] will remain unlocked and the horn will chirp five times.
- Pressing the button on the key once:
  - Locks all doors[1].
  - Arms the alarm (after a short delay).
  - Switches the interior dome lamp off (if the switch is set to door position).
  - Flashes the exterior turn signals (if selected in the Customisation menu).
  - Deactivates the power windows (after a predetermined period of time).
- Pressing the button on the key a second time:
  - Chirps the horn (if selected in the Customisation menu) and arms the alarm immediately, bypassing the 30 second delay period.
- Pressing the button on the key once:
  - Unlocks either the driver's door only or all doors[1] (depending on your setting in the Customisation menu).
  - Disarms the alarm.
  - Switches on the interior dome lamp (if the switch is set to the position) and power windows for a short time.
  - Flashes the exterior turn signals (if selected in the Customisation menu).
  - Switches on the approach lighting for a predetermined time. Refer to *Lights* in chapter 1A.
- Pressing the button a second time:
  - Unlocks all the other doors[1] (if pressing the first time, unlocked the driver's door only).
  - Flashes the exterior turn signals (if selected in the Customisation menu).
  - Reactivates the approach lighting again.

[1] *Includes tailgate for Sportwagon models.*

SECURITY cont.

Immobiliser

This vehicle is fitted with an immobiliser. It prevents unauthorised engine starting.

The ignition key will be recognised by the vehicle when the key is inserted into the ignition switch allowing the engine to be started.

When difficulties in starting the vehicle are experienced, check the following points. If the vehicle still fails to start, contact your Holden Dealer.

- The vehicle will only start with the fold away key blade* fully extended.
- Avoid having large bundles of keys attached to the ignition key.
- Avoid having keys from other vehicles attached to the ignition key.
- Do not attempt to start the vehicle with a non-approved key.

Note

- Do not disassemble key.
- Replacement keys can only be programmed by your Holden Dealer.
- If the vehicle's key is lost, inform your Holden Dealer immediately so the vehicle can be reprogrammed to no longer recognise the missing key as valid.
- A maximum of 4 keys can be programmed to suit one vehicle.

NOTES

CHAPTER 3

Know your vehicle

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*The asterisk signifies equipment options not in all vehicles, model variants, engine options, optional equipment and Genuine Holden Accessories (and Parts).

SEATS

FRONT SEATS

WARNING – SIDE IMPACT AIRBAGS (SIAB)

Do not fit unauthorised seat covers as they may impair the deployment of the SIAB. Do not position your body or any object (including pillows) between front seats and doors. Front seat occupants should not lean on or sleep against the door. Always sit centrally in the seat. Always wear a seatbelt. Refer to *Airbags* further on in this chapter.

WARNING

Do not adjust the driver's seat when the vehicle is moving as the seat could move suddenly causing the driver to lose control.

Seat adjustment (seats with a single switch, 4-way)

To adjust the height*:

- Move the whole of the switch up to raise the seat.
- Move the whole of the switch down to lower the seat.

To adjust the tilt*:

- Tilt the switch up at the front to tilt the front of the seat up.
- Tilt the switch down at the rear to tilt the seat down at the rear.

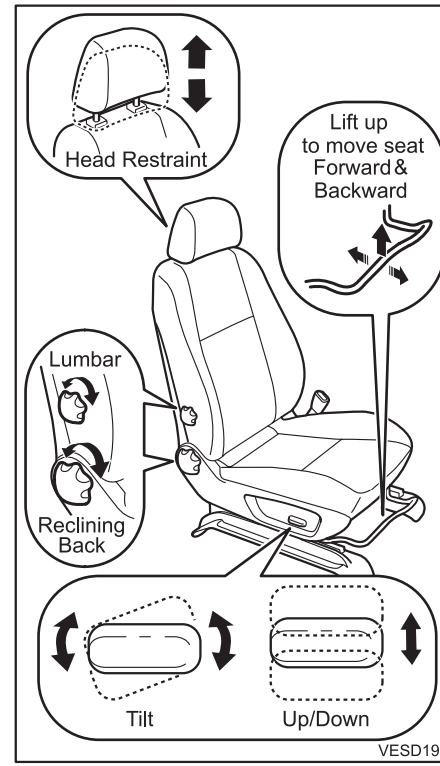
To move the seat forwards/backwards:

- Lift up the bar at the front of the seat, to disengage the latch,
- Slide the seat forwards or backwards,
- Release the bar, to re-engage the latch.

Note Try to move the seat back and forth to check that the latch is fully engaged.

To recline the seat back:

- Turn the lower hand wheel on the door side of the seat in the direction you want the seat back to move.



WARNING

To avoid reducing the effectiveness of seatbelts, seat backs should only be upright or at most semi-reclined when the vehicle is moving.

To adjust the lumbar support*:

- Turn the upper hand wheel (on the door side of the seat).

This alters the support given to the lower part of your back.

SEATS cont.

Seat adjustment (seats with a single switch, 6-way)*

To adjust the height:

- Move the whole of the horizontal switch up to raise the seat.
- Move the whole of the horizontal switch down to lower the seat.

To adjust the tilt:

- Tilt the horizontal switch up at the front to tilt the front of the seat up.
- Tilt the horizontal switch down at the rear to tilt the seat down at the rear.

To move the seat forwards/backwards:

- Move the whole of the horizontal switch forwards or backwards. The seat moves in the same direction as the switch.

To recline the seat back

- Turn the lower hand wheel on the door side of the seat in the direction you want the seat back to move.

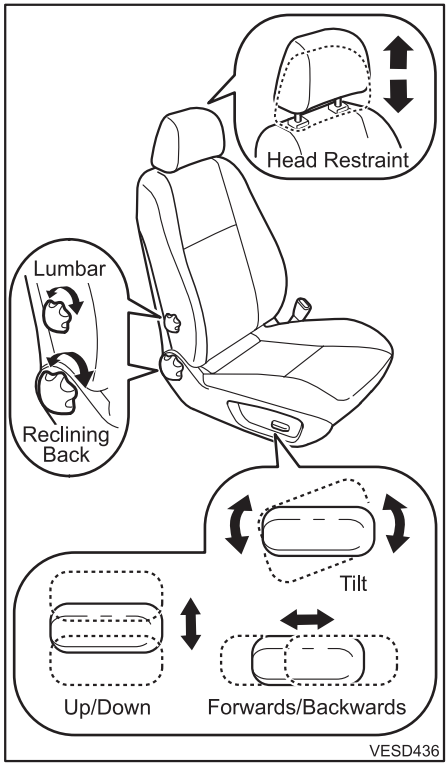
WARNING

To avoid reducing the effectiveness of seatbelts, seat backs should only be upright or at most semi-reclined when the vehicle is moving.

To adjust the lumbar support:

- Turn the upper hand wheel (on the door side of the seat).

This alters the support given to the lower part of your back.



SEATS cont.

Seat adjustment (seats with a dual switch, 8-way)*

To adjust the height:

- Move the whole of the horizontal switch up to raise the seat.
- Move the whole of the horizontal switch down to lower the seat.

To adjust the tilt:

- Tilt the horizontal switch up at the front to tilt the front of the seat up.
- Tilt the horizontal switch down at the rear to tilt the seat down at the rear.

To move the seat forwards/backwards:

- Move the whole of the horizontal switch forwards or backwards. The seat moves in the same direction as the switch.

To recline the seat back:

- Tilt the vertical switch to adjust the angle of the seat back. The seat moves in the same direction as the switch.

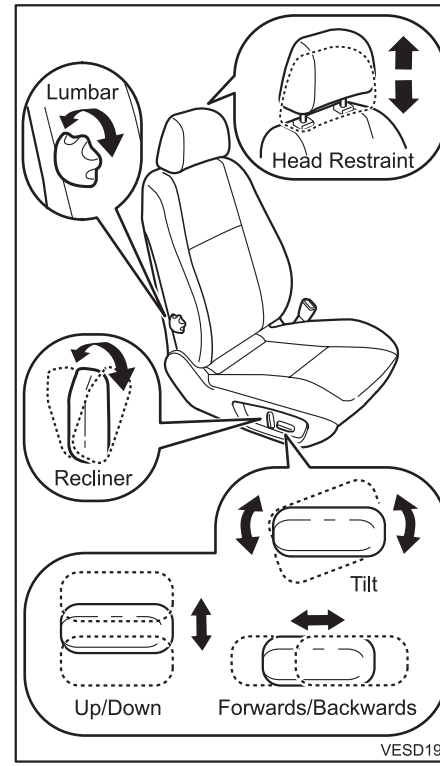
WARNING

To avoid reducing the effectiveness of seatbelts, seat backs should only be upright or at most semi-reclined when the vehicle is moving.

To adjust the lumbar support:

- Turn the hand wheel (on the door side of the seat).

This alters the support given to the lower part of your back.

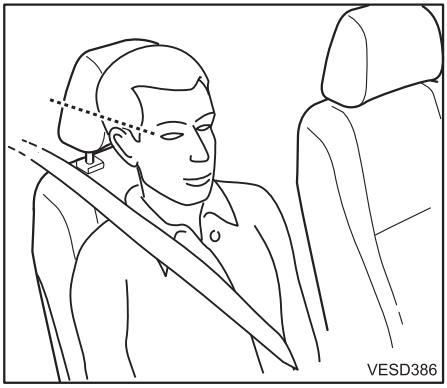


SEATS cont.

Head restraint

WARNING

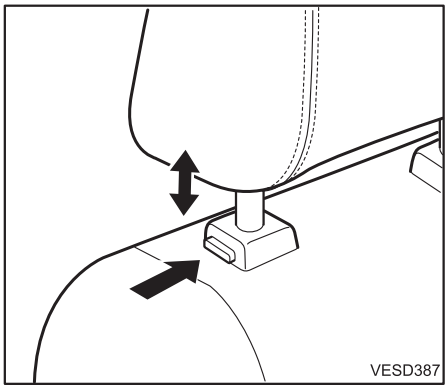
- This safety feature is not intended as a headrest. It is solely for the reduction of whiplash neck movement in an accident involving your vehicle.
- The centre of the head restraint should be at eye level, never at neck level.



To raise the height of the head restraint, lift the head restraint upwards.

To lower the height of the head restraint, push in the locking button at the base of the head restraint pole and push the head restraint downwards.

Note The head restraints cannot be removed.



SEATS cont.

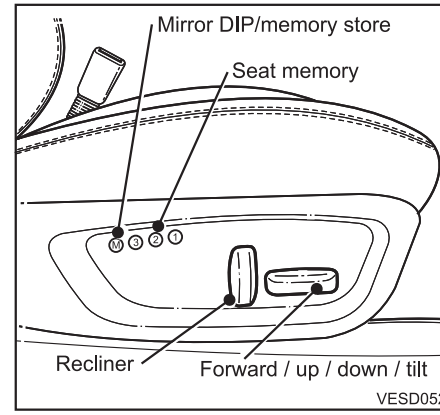
Memory settings for different drivers*

Up to three different settings of the driver's seat and the external mirrors can be stored.

WARNING

Before moving the seat (for example, by recalling a memory position), ensure that the path both in front of and behind the seat is clear of obstructions.

To store a memory position:



1. Adjust the driver's seat using the controls as shown. Refer to *Seat adjustment* previously in this chapter.
2. Adjust the external mirrors. Refer to *External rear view mirror* further on in this chapter.
3. Adjust the DIP system of the passenger's side mirror. Refer to *External mirror DIP* further on in this chapter.
4. With the ignition on, move the gear selector lever to position **P** or **N**.
5. Press the **M** button (Mirror DIP/ memory store). This will be confirmed by a single chime. Within 5 seconds press the desired memory button (**1**, **2** or **3**) to store the settings. A double chime will sound to confirm the settings are stored.
6. Move the gear selector lever to position **R** to move the passenger's side mirror to the DIP position and to store this setting.

To recall a memory position:

- Press and hold the desired memory button (**1**, **2** or **3**) until the seat is in the set position. Then release the button.

Note As soon as you release the button, the seat will stop moving, irrespective of its current position.

SEATS cont.

Using personal identity keys*

When the button on the key is pressed the system identifies the key and remembers the last settings used for that key. The memory seat* is then automatically moved to the last position used for that key, whether that was a memory button position or whether the seat was adjusted without memorising the position. Refer to *Personal identity keys* in chapter 2.

Note

- The seat will only move to the personal identity key setting if the button on the key is pressed. Alternatively, press a memory button on the seat to move the seat.
- The mirror DIP function is linked to the seat/personal identity key memories. Each seat memory position also stores whether the mirror was set to DIP or not. Refer to *External mirror DIP* further on in this chapter.

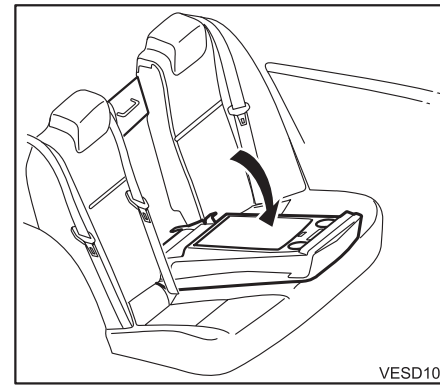
SEATS cont.

REAR SEAT

Sedan

WARNING

- Do not press the release button on the top of the seat back while the vehicle is moving. This could cause damage or injuries to the occupants.
- Do not allow passengers to sit on the folded seat backs while the vehicle is in motion. Unrestrained luggage or passengers on a folded seat back could be thrown within or ejected from the vehicle in a sudden stop or accident.


VESD103

The middle section of the rear seat may be folded forwards to gain access to the boot area or for carrying long loads.

To fold the middle section forward, press the lock button (located at the top centre of the middle seat) all the way down.

To return to the upright position, make sure the seatbelt is free. Push back into place and ensure that the lock button is fully engaged.

Sportwagon

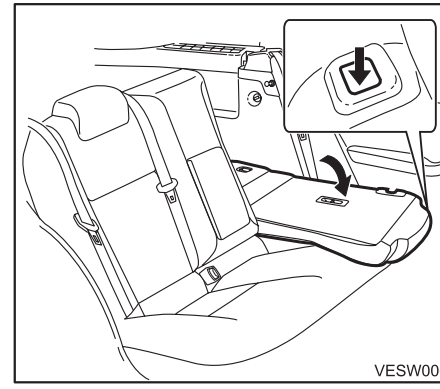
The rear seat back is divided into two sections. Either section or both sections may be folded down.

To fold down a seat back section, press the lock button (located next to the head restraint) all the way down. Fold the seat back forward.

To return the seat backs to the upright position, enure the seatbelts are free. Fold the seat back rearward until the latch is engaged.

Note

- Try to move the seat back to check that the latch has engaged.
- If the seat back is not completely engaged, the word UNLOCKED and the colour red around the lock button are visible. Repeat the latching procedure until the lock button is fully raised.

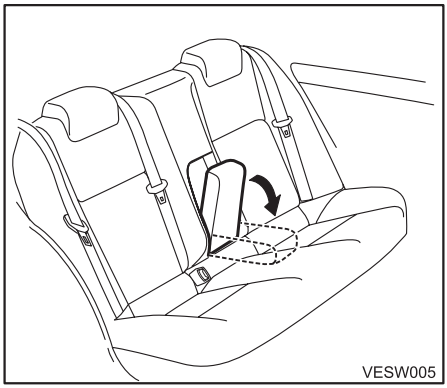

VESW006

SEATS cont.

Rear arm rest*

An armrest is provided in the middle of the rear seat. To fold down the armrest, insert your hand at the top of the armrest and pull down. Push the armrest up when it is no longer required.

Note Ensure the armrest is folded up before folding the seat forward.



Sedan – adjustable rear head restraints*

WARNING

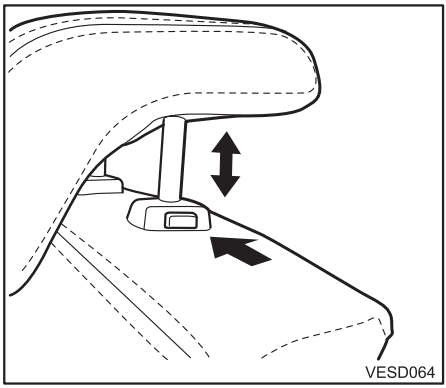
- This safety feature is not intended as a headrest. It is solely for the reduction of whiplash neck movement in an accident involving your vehicle.
- The centre of the head restraint should be at eye level, never at neck level.



To raise the height of the head restraint, lift the head restraint upwards.

To lower the height of the head restraint, push in the locking button at the base of the head restraint pole and push the head restraint downwards.

Note The rear head restraint/s may be removed when the fitment of certain child seats is required. Refer to *Child restraints* further on in this chapter.



RESTRAINTS

SEATBELTS

WARNING

- Seatbelts are designed to bear upon the bony structure of the body, and should be worn low across the front of the pelvis or the pelvis, chest and shoulders, as applicable; wearing the lap section of the belt across the abdominal area must be avoided.
- Seatbelts should be adjusted as firmly as possible, consistent with comfort, to provide the protection for which they have been designed. A slack belt will greatly reduce the protection afforded to the wearer.
- Care should be taken to avoid contamination of the webbing with polishes, oils and chemicals, and particularly battery acid. Cleaning may safely be carried out using mild soap and water. The belt should be replaced if webbing becomes frayed, contaminated or damaged.
- It is essential to replace the entire assembly after it has been worn in a severe impact even if damage to the assembly is not obvious.
- Belts should not be worn with straps twisted.
- Each belt assembly must only be used by one occupant; it is dangerous to put a belt around a child being carried on the occupant's lap.
- No modifications or additions should be made by the user which will either prevent the seatbelt adjusting devices from operating to remove slack, or prevent the seatbelt assembly from being adjusted to remove slack.

Pregnant women

Seatbelts work for everyone, including pregnant women. Like all occupants, they are more likely to be seriously injured if they do not wear a seatbelt. A pregnant woman should wear a lap/sash belt with the lap portion of the belt worn as low as possible below the rounding of their stomach, throughout the pregnancy.

RESTRAINTS cont.

Lap/sash belts

To fasten the seatbelt:

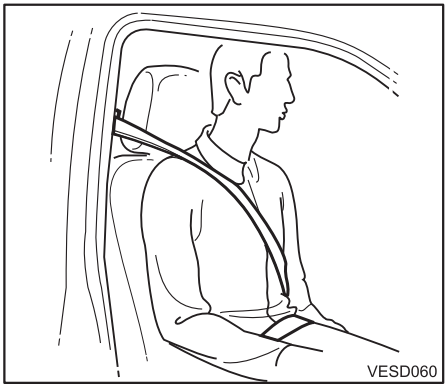
- Pull the metal tongue across your body and clip it into the buckle.
- When the metal tongue is locked safely into place you will hear a 'click'.
- Give a gentle pull on the buckle to ensure full engagement.
- After fastening, settle the belt at the hip, and run your hand under the sash from hip to shoulder to ensure that the belt fits comfortably and is free from twists. Any extra belt length retracts automatically.
- Ensure the lap section of the belt is also free from twists and fits firmly across your hips.



Note For your safety, wear the lap section of the seatbelt as low as possible on your hips, not on your waist or abdomen.

The 'emergency-locking retractor belt' allows you to move while the vehicle is travelling normally, but locks immediately on fast braking, impact with a solid object or any quick movement by the wearer.

To undo the belt, press the release button on the buckle and allow the belt to retract. Check that it fully retracts without twisting or turning.

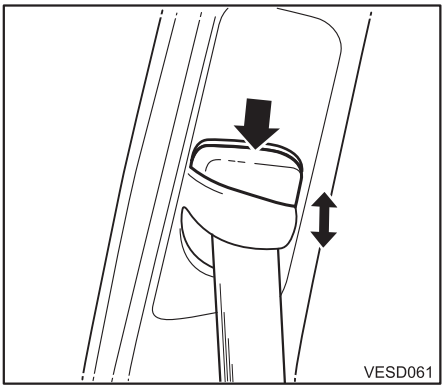


Shoulder height adjust*

The seatbelt is anchored to the vehicle near your shoulder. The position of the seatbelt anchor can be adjusted to accommodate the height of the wearer.

Shorter people should select a low anchor position; taller people a higher one. This ensures, for both safety and comfort, that the webbing of the seatbelt fits on the shoulder.

- Press and hold the adjuster down and move it up or down as required.
- Release the adjuster and ensure that the anchor clicks into position.



WARNING

- For your safety, do not adjust the driver's side shoulder belt anchor while the vehicle is in motion.

RESTRAINTS cont.

CHILD RESTRAINTS



VESD065

WARNING – EXTREME HAZARD

- Do not use a rearward facing child restraint on a seat protected by an airbag in front of it.

  The child could be seriously injured if the airbag inflates, as the child's head would be very close to the inflating airbag.
- Remember that it is safest for children to be seated in the rear seats.

WARNING

- This manual provides you with general information concerning child restraints only.
- The driver is required by law to ensure that passengers are suitably restrained. In most States and Territories of Australia, specific laws may exist which require children to be seated in approved child restraints.
- Holden strongly recommends that you refer to your specific State or Territory regulations to determine which child restraint is suitable for your child.

WARNING

- Always ensure that the seatbelt fits firmly around the child restraint.
- If a child cannot see out of the window, do not raise him/her by means of an ordinary cushion. It will not stay in place in a collision and the child can slip out of the straps and become entangled.

Note Sedan rear head restraint removal (for use with child seats only). Fitment of certain child seats may be made easier with the removal of the rear head restraint/s. To remove a rear head restraint, raise the head restraint fully, then insert a small probe into the hole on the side of the non adjusting pole guide and press inwards. Simultaneously press the release button on the other pole guide and lift the head restraint up and out. Removed head restraints should be stored in a safe location. Head restraints should be reinstalled when child seats are no longer in use.

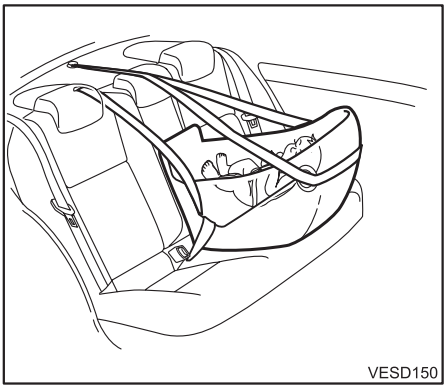
WARNING

- Always follow the child restraint manufacturer's fitting instructions when installing a child restraint into the vehicle.

RESTRAINTS cont.

Infants

Rearward facing infant capsules are designed so that in the event of a collision, impact forces will be evenly spread over the baby's back, with minimal jarring to the vulnerable head and neck area.



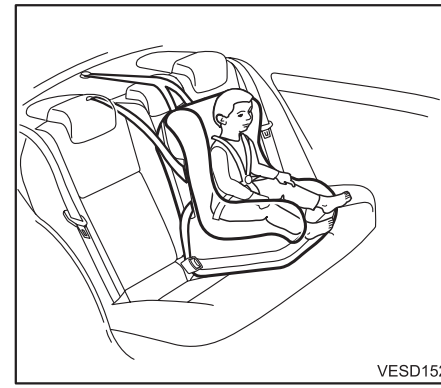
Recommended weight and height for rearward facing infant capsule	
Weight	Height
Up to 9 kg*	Up to 70 cm*

*AS/NZS 1754:2004

RESTRAINTS cont.

Young children

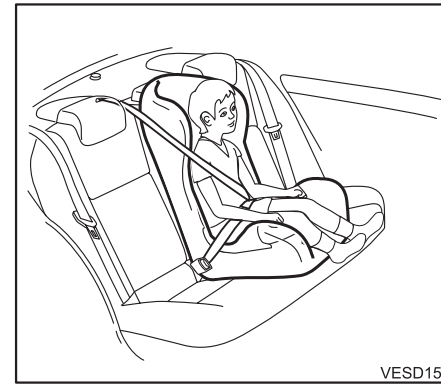
Forward facing child seats are for use when the child is able to sit and easily hold his or her head upright. It is also possible to purchase convertible seats which can be used as a rearward facing child restraint or converted to a forward facing child seat.


VESD152

Recommended weight for forward facing child seat
Weight
8 to 18 kg*

*AS/NZS 1754:2004

Booster seats are for when children outgrow a typical forward-facing child seat but they are still too small for lap/sash seatbelts. A booster seat raises the child so that the knees bend comfortably, the lap/sash seatbelt is correctly positioned and the child can see out the window. A rigid booster seat with a back, side wings and sash guide gives the best protection.


VESD156

Recommended weight for booster seat with lap/sash seatbelt
Weight
14 to 26 kg*

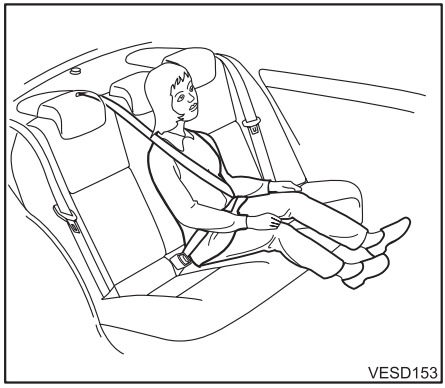
*AS/NZS 1754:2004

RESTRAINTS cont.

Older children

A child should use a normal lap/sash seatbelt only when:

- he/she can sit against the back of the rear seat with knees bent comfortably at the edge of the seat,
- lap belt rests low and snug across the hips – not across the stomach,
- the sash belt is centred on the shoulder and chest,
- he/she is able to stay seated like this for the entire trip.


VESD153

ANCHORAGE POINTS

WARNING

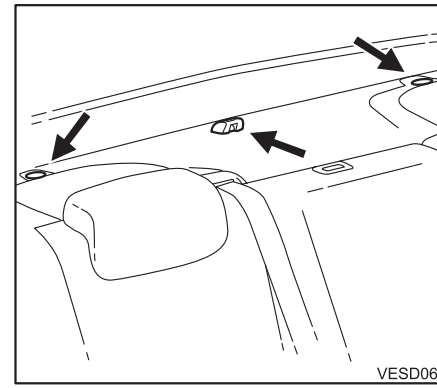
- Child restraint anchorages are designed to withstand only those loads imposed by correctly fitted child restraints. Under no circumstances are they to be used for adult seatbelts, harnesses, or for attaching other items or equipment to the vehicle.
- Only child restraints that have clips to attach to the vehicle's anchorage fitting (as shown in the following illustrations) are to be used. Earlier types of child restraints may not attach securely to this type of anchor.
- Use only Standards Australia approved child restraints and harnesses. Only purchase a child restraint which carries the appropriate Standards Australia sticker of approval.
- Where legally allowable, you may install a forward-facing child restraint in the front seat, but always move the passenger's seat as far back as it will go. The forward facing child restraint must still be attached to the left hand child restraint anchorage point, located behind the rear seat.
- Remember, it is safest for children to be seated in the rear seat.

RESTRAINTS cont.

Sedan anchorage points

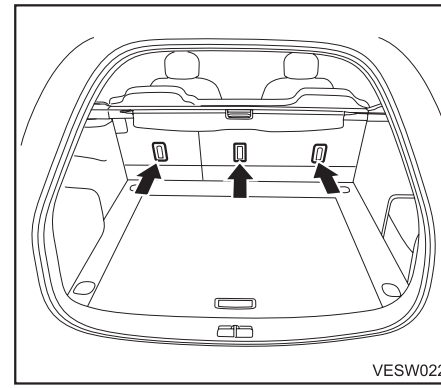
Sedan models are fitted with three anchorage points for child restraints. An anchor fitting has been provided in the centre position.

Additional fittings may be purchased from your Holden Dealer.

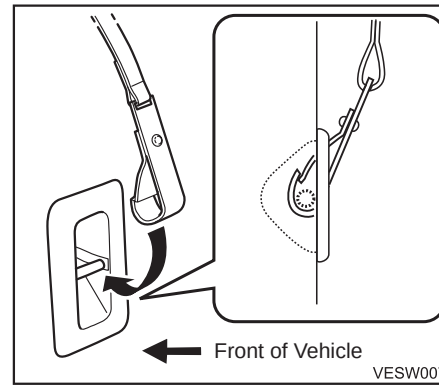


Sportwagon anchorage points

Sportwagon models are fitted with three anchorage points for child restraints. Anchor fittings are provided in all three positions.



Attach the child restraint top tether strap as illustrated.



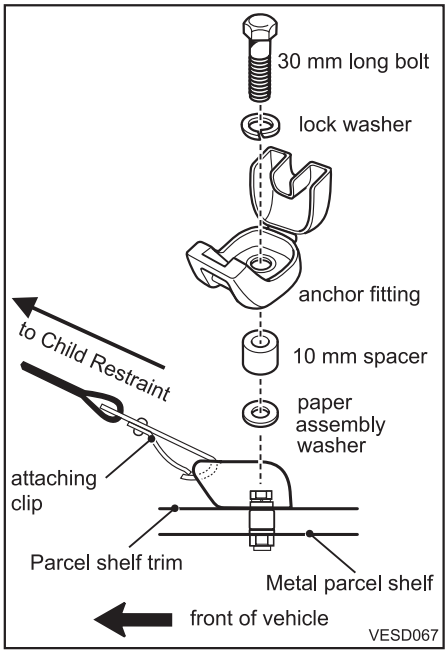
RESTRAINTS cont.

Holden child restraint anchor fitting (Sedan)

If you wish to put a child restraint in either of the outer positions, first remove the cover plug by turning anticlockwise and pulling upwards at the same time. Then, install the additional anchor fitting using the bolt, washer and spacer, as illustrated.

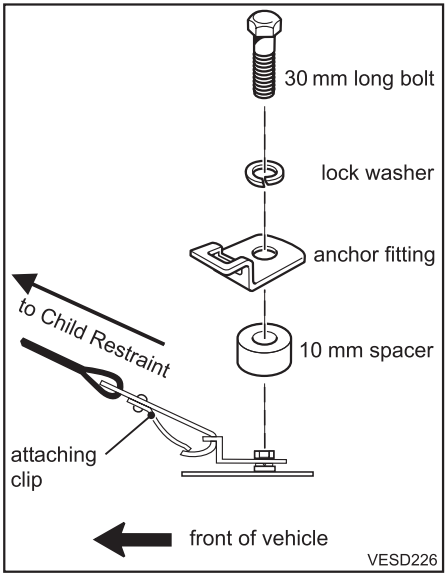
Ensure that the bolt is securely tightened to 20 ± 5 Nm (Newton metres). Check with your Holden Dealer if unsure.

Note If unsure about installing a child restraint anchor fitting, please contact an approved restraint fitting station or your Holden Dealer.



Generic child restraint anchor fitting (Sedan)

Some generic child restraint anchor fittings come with a selection of spacers. Use a 10 mm spacer.



SUPPLEMENTAL RESTRAINT SYSTEM

AIRBAGS

When airbags inflate, an operating noise may be heard and a small amount of smoke-like gas is released. The gas is harmless and does not indicate malfunction or fire. The airbag then deflates, with the whole process taking only a moment.

WARNING

- Airbags are part of the 'Supplemental Restraint System (**SRS**)' as they assist, but do not replace seatbelts. Airbags do not deploy in every accident. Various factors dictate whether they deploy including speed, angle of collision and object hit. Airbags are not designed to inflate if the vehicle is hit from the rear or is involved in a rollover. Seatbelts must be worn by all passengers whenever the vehicle is moving.
- Airbags inflate with great force. If you are too close to an inflating airbag it may cause injury. Seatbelts help keep you in position for airbag inflation in the event of a collision.

Fifteen seconds after any airbag or seatbelt pretensioner has been activated (the vehicle has stopped and provided there is battery power), the vehicle will switch:

- off the engine
- off the fuel pump
- on the hazard lamps
- on the interior lamp
- and unlock the doors.

Switch the ignition off and then on if restarting the engine is required.

An **SRS** warning lamp on the instrument panel illuminates for a few seconds when the ignition is switched on. This is to indicate that the airbags are operational. If the lamp does not illuminate when the ignition is switched on, or if it illuminates when driving, contact your Holden Dealer immediately, as the airbags and seatbelt pretensioners may not function correctly in the event of an accident.

The warning lamp illuminates after an accident if any airbags or seatbelt pretensioners have activated. Refer to *Warning/reminder indications* in chapter 1A.

After an accident in which the driver's airbag system is deployed, the steering wheel, steering column, airbag, seatbelt retractor, seatbelt buckle, Sensing Diagnostic Module (SDM) and sensor(s), must be replaced. The occupied front seat must be checked for seat base and seat back deformation.

After passenger's airbag deployment, the airbag assembly, seatbelt retractor, seatbelt buckle and the upper part of the instrument panel must be replaced. The occupied front seat must be checked for seat base and seat back deformation.

After Side Impact Airbag (SIAB) deployment, the relevant seat, seatbelt retractor, seatbelt buckle, sensor and Sensing Diagnostic Module (SDM) must be replaced.

After curtain airbag deployment, the relevant airbag, headliner and interior trim panels must be replaced.

It is recommended that this work be carried out by a Holden Dealer or approved repairer.

The system should also be inspected by a Holden Dealer if the dashboard area or steering wheel is scratched, cracked or damaged or the front seats and upholstery are damaged or if the headliner or trim panels are damaged.

Extensive design and testing has gone into the Holden airbag system. However, it should be treated with respect. Any interference with the system could lead to its failure or to accidental inflation.

Any work to the electrical system, steering column, dashboard area, steering wheel, front seats, headliner and interior trim panels or airbag system should only be carried out by an authorised Holden Dealer.

Note Fitting a roo bar or nudge bar can change the impact speed which would normally cause the front airbags to inflate, reducing effectiveness and potentially increasing the risk of injury and repair cost. Refer to *Add on equipment* in chapter 4.

SUPPLEMENTAL RESTRAINT SYSTEM cont.

Airbags and child restraints



WARNING – EXTREME HAZARD

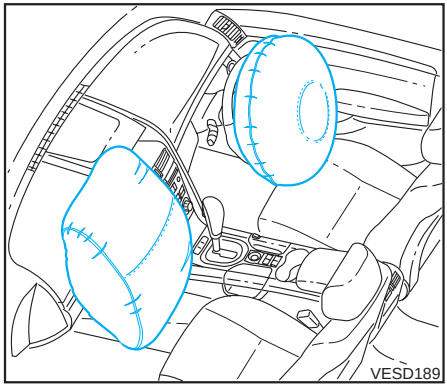
- Do not use a rearward facing child restraint on a seat protected by an airbag in front of it.

  The child could be seriously injured if the airbag inflates, as the child's head would be very close to the inflating airbag.
- Remember that it is safest for children to be seated in the rear seats.

Refer to *Child Restraints* previously in this chapter.

Front airbags

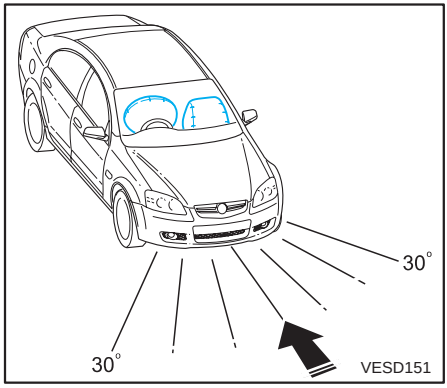
The driver's airbag is stored inside the steering wheel. AIRBAG is stamped on the steering wheel and a label is attached under the driver's side sun visor.



WARNING

- The horn pad must not be covered with adhesive or any other material.
- The driver should adjust the seat as far rearward as possible while still maintaining control of the vehicle.

The front passenger's airbag is stored in the dashboard. The wording AIRBAG above the glovebox and a label attached under the sun visor indicate that a passenger airbag is fitted.



WARNING

- Do not place any objects on or over the dashboard or between an airbag and yourself.
- Do not hang anything from the sun visor or mirror.
- Passengers must not rest their feet on the dashboard.

Front airbags will inflate in certain severe frontal or near frontal impacts. Front airbags are not designed to inflate if the vehicle is struck from the side, rear or in rollovers. Always wear a seatbelt.

SUPPLEMENTAL RESTRAINT SYSTEM cont.

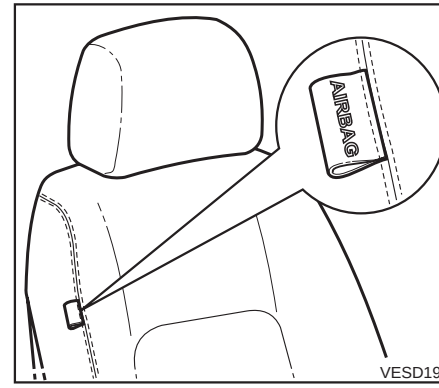
Side Impact Airbags (SIAB)

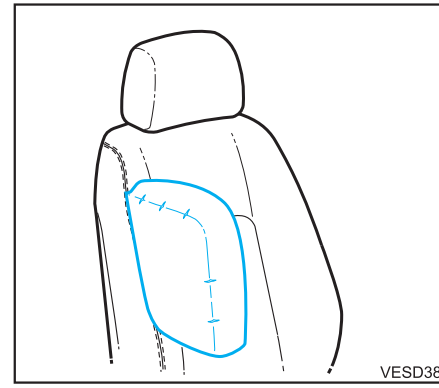
Side Impact Airbags (SIAB) for the driver and front passenger are stored in the side of the seat backs closest to the door. Side Impact Airbag (SIAB) labels are on the side of the seat backs.

A SIAB only deploys on the side of the vehicle that is struck.

Note

- A Side Impact Airbag (SIAB) will deploy and offer protection in most, but not all, severe side impacts. Because of the limited time available to detect some side impacts, it is not possible to deploy the SIAB in all serious accidents (for example, some pole impacts).
- A Side Impact Airbag (SIAB) will deploy in certain severe side impacts. SIAB are not designed to inflate if the vehicle is struck from the front, rear, or in rollovers. Always wear a seatbelt.

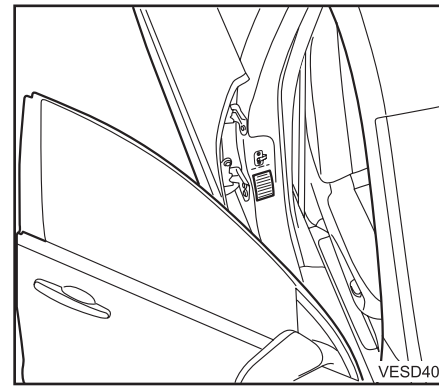




- Side Impact Airbags (SIAB) labels are on both door lock pillars.

WARNING

- Do not fit unauthorised seat covers as they may impair the deployment of the Side Impact Airbags (SIAB).
- Do not position your body or any object (including pillows) between front seats and doors.
- Do not lean on, or sleep against, the door. Always sit centrally in the seat.
- Always wear your seatbelt.



SUPPLEMENTAL RESTRAINT SYSTEM cont.

Curtain airbags

The vehicle is fitted with curtain airbags. Labels are on the vehicle in the positions shown.

Curtain airbags are stored in the roof area, just above the front and rear doors. The curtain airbag only deploys on the side of the vehicle that is struck.

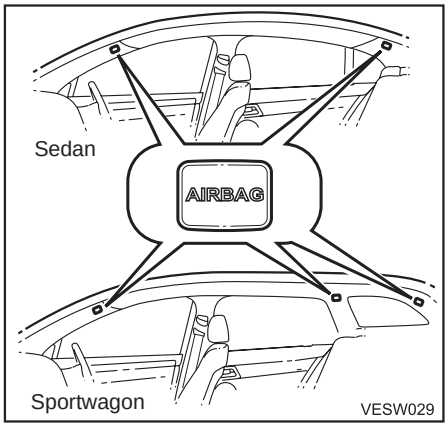
Curtain airbags will deploy in certain severe side impacts to the passenger area.

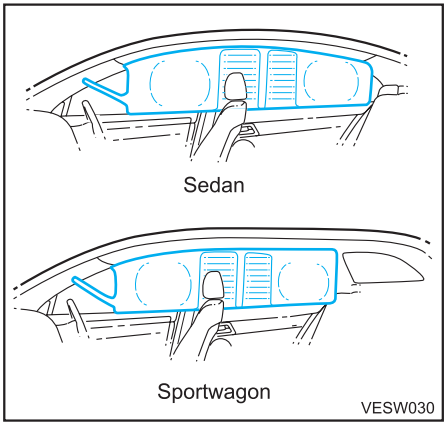
Note

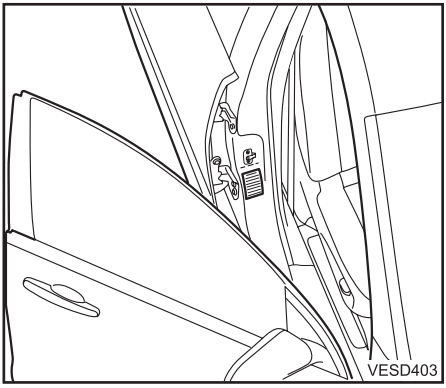
- A curtain airbag will deploy and offer protection in most, but not all, severe side impacts. Because of the limited time available to detect some side impacts, it is not possible to deploy a curtain airbag in all serious accidents (for example, some pole impacts).
- A curtain airbag will inflate in certain severe side impacts. Curtain airbags are not designed to inflate if the vehicle is struck from the front, rear or in rollovers. Always wear a seatbelt.
- Curtain airbags labels are on both door lock pillars.

WARNING

- Do not position your body or any object (including pillows) in the area in which the airbag inflates.
- There must be no objects in the area in which the airbag inflates. Refer to the illustration.
- Use the hooks above the doors only to hang up light articles of clothing.
- Do not place any objects in the pockets of the hanging items.
- Do not hold onto the assist grips (above the doors) while seated in the vehicle.
- Always wear your seatbelt.
- Do not lean on, or sleep against the front or rear doors. Always sit centrally in the seat.

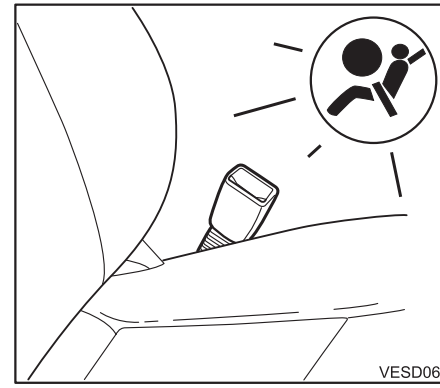






SUPPLEMENTAL RESTRAINT SYSTEM cont.

SEATBELT PRETENSIONERS



The front seatbelt system incorporates seatbelt pretensioners. They are part of the Supplemental Restraint System (**SRS**). In certain severe frontal, side or rear collisions, both belt buckles are pulled downwards, instantly tightening both the sash and the lap sections of the seatbelt.

If the seatbelt pretensioners have been activated, the **SRS** warning lamp on the instrument panel will stay illuminated when the ignition is switched on. This is designed to remind you that the pretension system has been used and therefore needs to be replaced by your Holden Dealer. The seatbelts will remain operational.

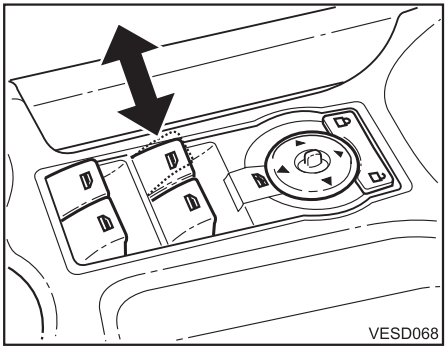
If the **SRS** warning lamp comes on at any other time, or if the warning **Airbag Fault** is displayed on the instrument panel centre display, have the system checked by your Holden Dealer immediately. Refer to *Warning/reminder indications* in chapter 1A.

POWER WINDOWS

OPERATING THE POWER WINDOWS

The power window switches are located between the front seats.

The switches are operational when the ignition is switched on or the button on the key is pressed.


VESD068

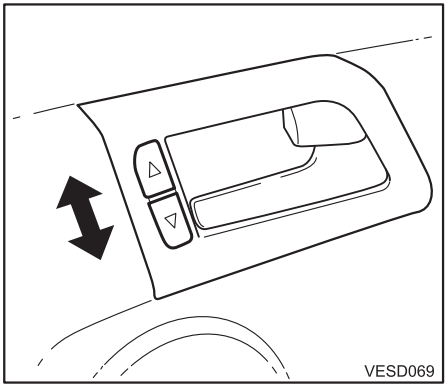
WARNING

Before operating the power windows, check they are free of obstructions and that passengers and pets are not in the proximity of the moving window.

- To lower a window, press and hold the respective button down.
- To raise a window, pull and hold the respective button up.

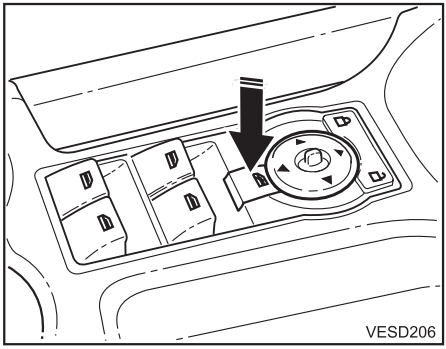
  The window stops moving up as soon as the button is released.

The rear windows can also be operated by individual switches located on the rear doors.


VESD069

Press the child safety switch once to deactivate the rear door switches. The child safety switch will remain in the down position. The rear windows are now operational from the centre console switches only.

Press the switch again to reactivate the rear door switches.


VESD206

POWER WINDOWS cont.

Auto down – front windows only

To open the windows fully, press and hold the switch down for at least half a second and then release. Press down again or pull up the switch to interrupt the automatic operation.

Rock the button to open the window in short steps.

Auto up – front windows only*

To close the window fully, pull and hold the switch up for at least half a second and then release. Press down or pull up the switch again to interrupt the automatic operation.

Rock the button to close the window in short steps.

Note If the window encounters any resistance during closing, the window will stop its progress and immediately open again.

Time delay

After pressing the button or after switching the ignition to LOCK, the power windows can be operated for 10 minutes, provided no door is opened.

If any door is opened after 45 seconds from the ignition being switched to LOCK, the power windows will be disabled.

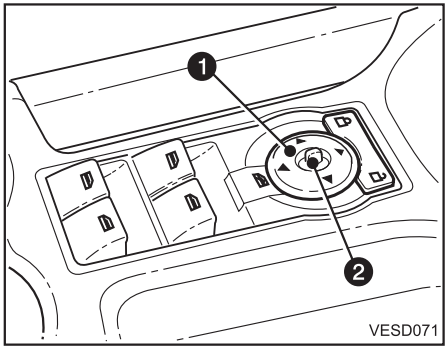
If any door is opened within 45 seconds from ignition being switched to LOCK, the power windows will remain operational for 45 seconds.

MIRRORS

EXTERNAL REAR VIEW MIRROR

To adjust the external rear view mirrors, switch the ignition on and use the switches in the centre console as follows:

- Move switch ❷ to the right to operate the right hand side mirror.
- Move switch ❷ to the left to operate the left hand side mirror.
- Press the arrow on switch ❶ to adjust the mirror to the direction the arrow is pointing to (i.e. up, down, left or right).
- Move switch ❷ back to its centre position. This deactivates switch ❶ and prevents unintentional adjustment of the mirrors.



WARNING

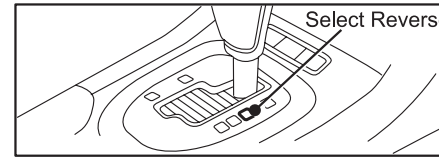
The passenger's side mirror is convex shaped, to provide a wider view. Objects in this mirror are closer than they appear.

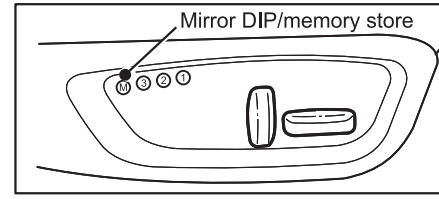
Heated external rear view mirrors*

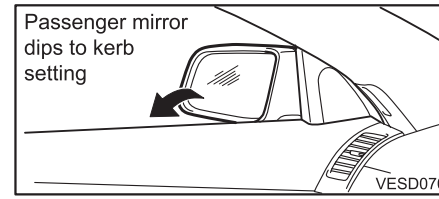
The mirror heating is switched on automatically when the rear window demister is switched on.

MIRRORS cont.

External mirror DIP*







The external mirror DIP allows you to move the passenger's side external mirror automatically to an alternative preset view while reversing the vehicle.

To operate the mirror DIP:

1. Switch on the ignition.
2. Move the gear selector lever to position **R**.
3. Briefly press the **M** button on the outer side of the driver's seat.

A double chime sounds if the mirror DIP is activated (alternative view).

A single chime sounds if the mirror DIP is deactivated (normal view).

4. To change from activated to deactivated mirror DIP or vice versa, briefly press the **M** button again.

To adjust the external mirror DIP:

1. Activate the mirror DIP (refer to the steps above).

   The passenger's side mirror will move to the position currently set (alternative view).
2. Adjust the mirror to the desired view. Refer to *External rear view mirror* previously in this chapter.
3. Move the gear selector out of position **R**.
4. To store the setting, briefly press the **M** button.

   Note To store the setting together with your seat position settings, briefly press the **M** button followed by the desired memory button (**1**, **2** or **3**).

Now the passenger's side mirror will move to the set view the next time the selector lever is moved to position **R**.

The vehicle's memory also remembers whether the mirror DIP was activated or not. To recall all the stored settings, press either the respective memory button (**1**, **2** or **3**) or push the button on your personal identity key*.

Refer to *Memory settings for different drivers* previously in this chapter and *Personal identity keys* in chapter 2.

MIRRORS cont.

INTERNAL MIRRORS

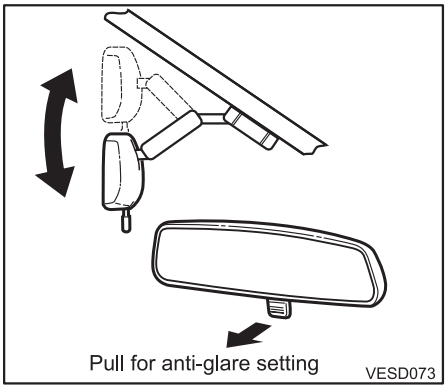
Internal rear view mirror

Push the lever on the lower edge of the mirror forwards (away from you) and then adjust the position of the mirror.

To reduce headlamp glare from following vehicles, pull the lever backwards (towards you).

Note The rear view clarity is reduced when the mirror is set to the anti-glare position.

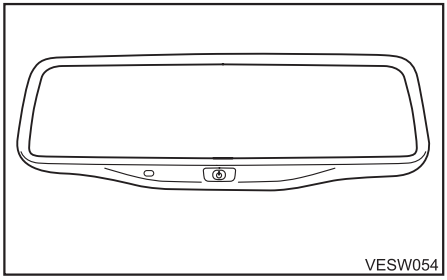
Return the lever back to its original position as soon as the glare has disappeared to restore the rear view.



Mirror, auto day/night*

The auto day/night mirror will automatically switch in and out of night view depending on the amount of light at the rear of the vehicle.

Note The button and lamp on the mirror are used for reverse camera* operation only. Refer to *Sportwagon reverse camera** in chapter 4.

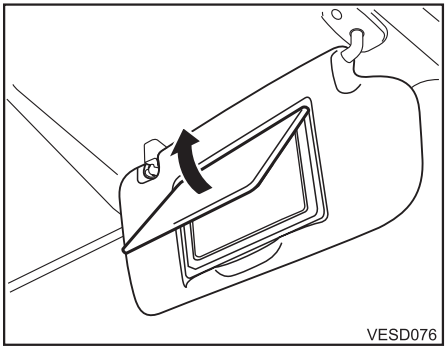


Vanity mirrors

To view the mirror, pull the cover up from the lower edge.

Illuminated mirrors*

The lamps at either side of the mirror automatically turn on and off when the cover is opened and closed.

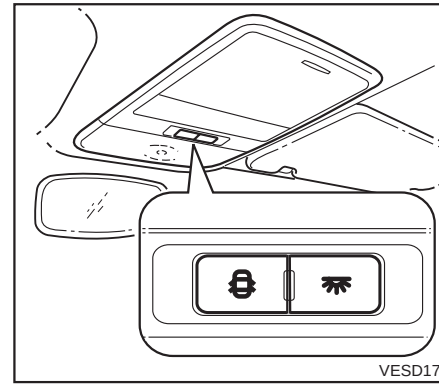


INTERIOR LAMPS

OPERATING THE INTERIOR LAMPS

Note The operation of interior lamps is also affected by the battery saver feature. Refer to *Battery saver* further on in this chapter.

Interior (dome) lamps


VESD171

There are two interior lamps. One is located in the centre-front and one in the centre-rear of the roof.

Two settings are available:

- = on/off

Press the button once to switch the lamp on continuously.

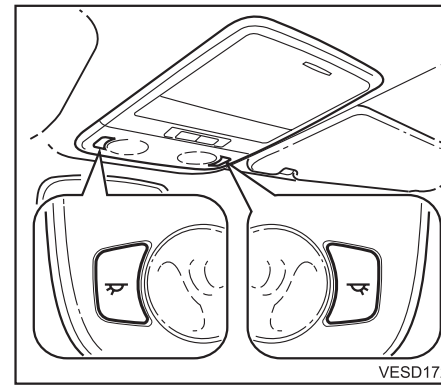
Press the button again to switch the lamp off.

- = door activated

The lamp automatically switches on when a door is opened, the vehicle is unlocked, or the key is removed from the ignition. It dims to off after all doors are closed. Switching the ignition on dims the lamps off immediately (unless a door remains open).

Note When the interior lamps are set to door activated they operate automatically only when it is dark.

Front reading lamps*


VESD172

Front reading lamps are incorporated into the interior lamp assembly in the roof console.

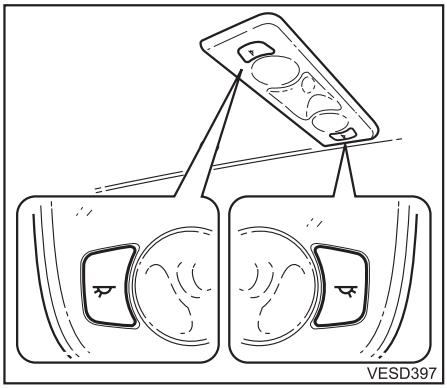
Press the button once to switch the lamp on or off.

INTERIOR LAMPS cont.

Rear reading lamps*

The rear reading lamps are incorporated in the interior rear lamp assembly.

Press the button once to switch the lamp on or off.

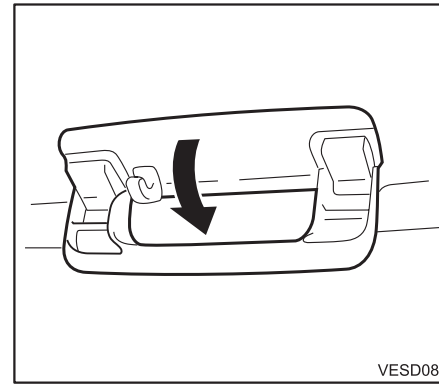


Boot (Sedan), cargo area* (Sportwagon) and glovebox* lamps

The lamp illuminates when the lid/tailgate is open and switches off automatically when the lid/tailgate is closed.

ASSIST GRIPS*

Assist grips are provided above the doors. When released, they will return to their stow position against the roof.



WARNING

- Do not hold onto assist grips while seated in the vehicle.
- Use the hooks above the doors only to hang up lightweight articles of clothing.
- Do not place any objects in the pockets of hanging items.

STORAGE COMPARTMENTS

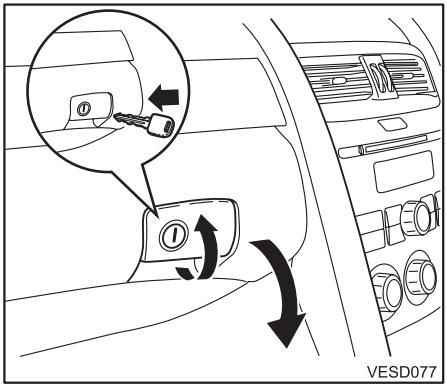
GLOVEBOX

The glovebox is located in the dashboard directly in front of the passenger seat.

To open the glovebox, pull the handle towards you. To close, push the lid firmly back into place.

A key is provided solely to lock and unlock the glovebox. Refer to *Keys* in chapter 2.

Note For security, the ignition key is not designed to operate the glovebox lock.



CENTRE CONSOLE

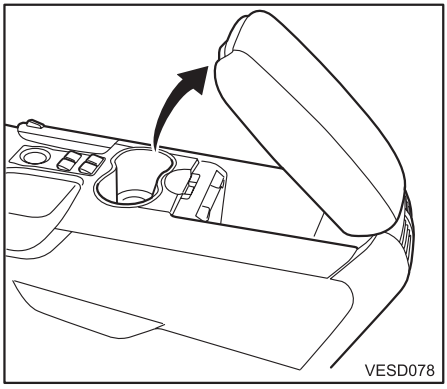
A storage area is provided under the front armrest.

To open, lift the latch on the underside of the front lip and lift the lid to a near vertical position.

There is a coin holder towards the front of the console.

Note Do not force the console lid further backwards.

The console provides space to accommodate a standard mobile telephone/charger, which can be plugged into the power socket located inside the console. Refer to *Power socket* further on in this chapter.



STORAGE COMPARTMENTS cont.

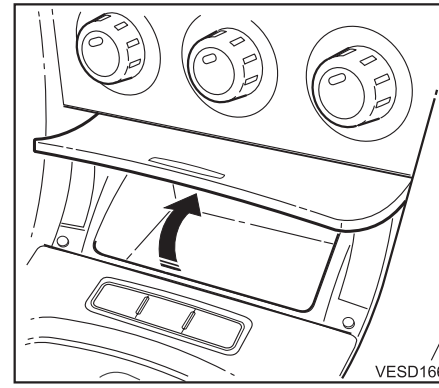
FRONT STORAGE COMPARTMENT

The front storage compartment is located below the heater controls on the dashboard.

To open the lid*, push in the bottom part and release it.

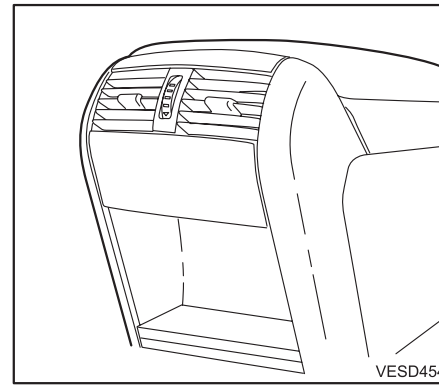
To close, move the lid back to its original position and press in the bottom part to engage the latch.

Note The inner liner* is removable for cleaning.



REAR STORAGE COMPARTMENT

The rear storage compartment is located at the rear of the centre console.

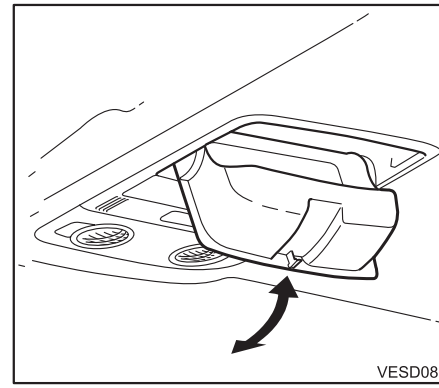


*SUNGLASSES HOLDER**

The sunglasses holder is located in the roof and is designed to accommodate one pair of sunglasses.

To open, push in the rear of the lid and release it.

To close, swivel the holder back to its original position and press in the rear of the lid to engage the latch.



STORAGE COMPARTMENTS cont.

CUP HOLDERS

Cup holders are designed for holding standard size soft drink cans and smaller size bottles. Larger drink bottles or cups should not be forced into the cup holders, or they may become jammed.

Note Only place cups with lids in the cup holders. This helps to avoid spillage while accelerating and braking.

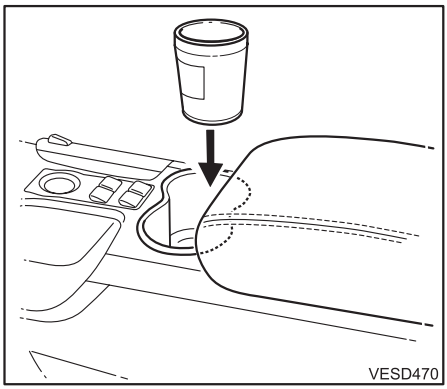
WARNING

To avoid scalding, never place hot drinks in the cup holders.

Front cup holders – centre

The centre cup holders are located forward of the centre console.

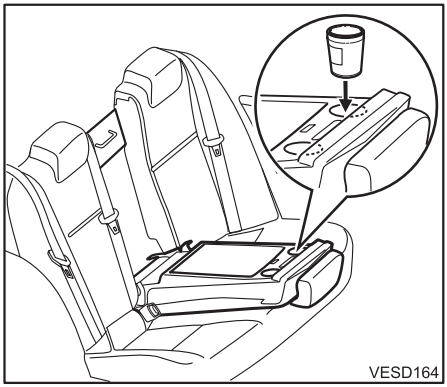
The rubber cup holder lining can be removed for cleaning.



Sedan rear cup holders

Cup holders are fitted to the front of the folded down section in the centre of the rear seat.

Note Remove all cups from the rear holders before folding back the centre section.



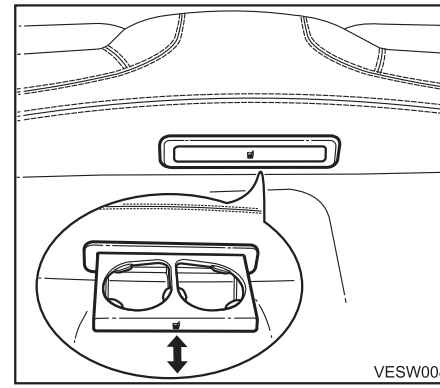
STORAGE COMPARTMENTS cont.

Sportwagon rear cup holders*

Cup holders are fitted in the front of the centre seat.

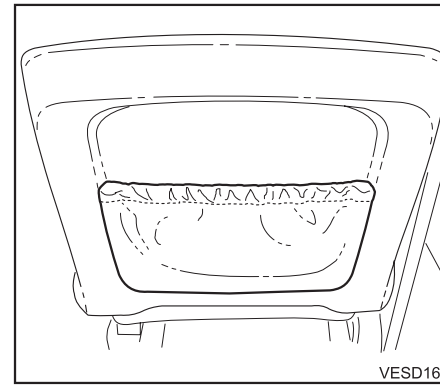
To open, push in the front part of the cover and release it.

To close, slide the cup holder back into the seat until the latch engages.



FRONT SEAT-BACK POCKETS

A storage pocket is located on the rear of both front seats.

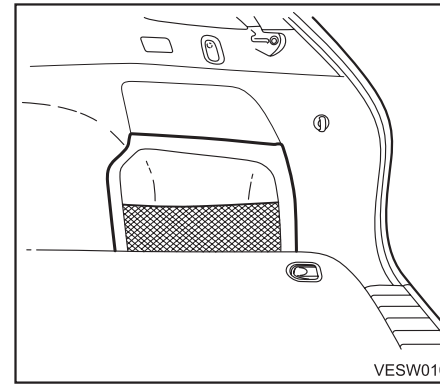


SPORTWAGON CARGO AREA

Storage compartment

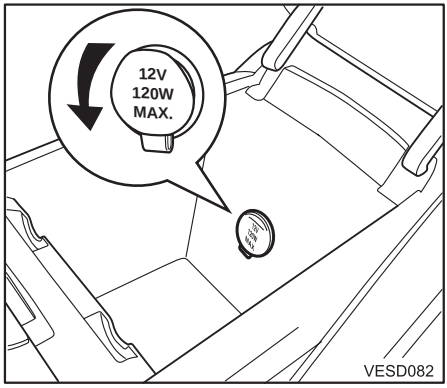
The storage compartment is located at the right side of the cargo area. Use for the storage of lightweight items, not exceeding 2 kg in total (e.g. street directories, folders, maps).

Note Heavy and/or sharp objects (e.g. loose tools) should not be stored in this compartment.



POWER SOCKET

Note Any accessory device (e.g. mobile phone, car fridge) connected to the power socket must not exceed a current draw of 10 amps.



Console power socket

The power socket is located inside the centre console.

The power socket is operational when the ignition is switched to either ON or ACCESSORIES.

WARNING

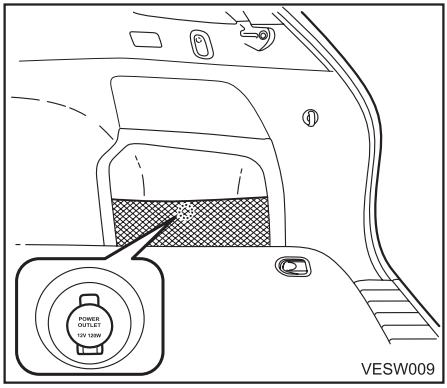
It is dangerous for the driver of a vehicle to attach or remove accessories from the power socket while driving. It may distract the driver's attention, putting the occupants of the vehicle and other road users at risk.

Sportwagon cargo area power socket

The power socket is located in the cargo area on the right side, inside the storage compartment. The power socket is operational when the ignition is switched to either ON or OFF.

WARNING

Do not use the cargo area power socket for a prolonged period, unless the engine is running, otherwise the vehicle's battery will discharge.

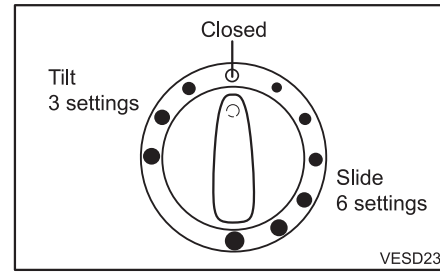


***SUNROOF**

OPERATING THE SUNROOF

The sunroof control is located in the roof between the sun visors. The sunroof can be tilted or slid back into the roof.

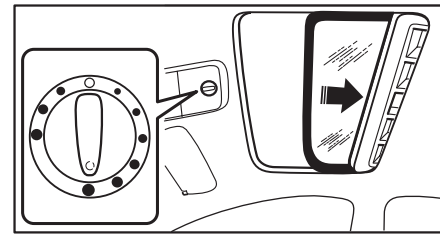
The sunroof will operate with the ignition in the ACCESSORIES or ON position. Refer to *Retained Accessory Power (RAP)* further on in this chapter.



Opening the sunroof

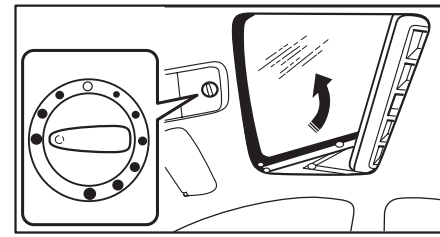
Turn the control clockwise to one of the six opening positions.

Note The sunroof drags the sunshade open as it slides open. It does not close the sunshade.



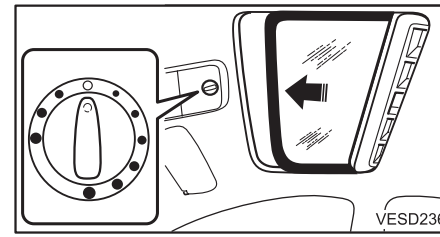
Tilting the sunroof

Turn the control anticlockwise to one of the three tilt positions.



Closing the sunroof

Turn the control to the closed position.

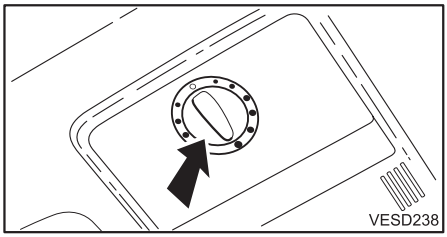


SUNROOF cont.*

Obstruction detection

If the sunroof encounters an obstruction when closing from the sliding position, it immediately returns to the fully open slide position.

If the sunroof encounters an obstruction when closing from the tilt position, it immediately returns to the fully open tilt position.



The sunroof will not move again until the control is pressed upwards or a different position is selected.

Note

- Obstruction detection is also active when the sunroof is moving from one level of tilt or slide opening to the next (in the closing direction).
- If an obstruction is detected during an auto-close operation, the sunroof returns to the fully open or tilted position and turns off.

WARNING

Obstruction detection only operates when the sunroof is closing. Before opening the sunroof, ensure that there are no obstructions, e.g. a roof rack.

Auto-close function

When the ignition is switched off, the sunroof closes automatically after three seconds.

Note

- When you switch the ignition on with the control in one of the open or tilt positions, the sunroof will not return to this position automatically. To return it to the position set, press the control upwards.
- To stop auto-closing, perform one of the following at any time after switching the ignition off:
  - Press the control.
  - Turn the control to a different position.

Recall function

Use the recall function if the sunroof position is not the same as the position set on the control. It can be activated if one of the following has occurred:

- The control was rotated to the position while the sunroof was switched off.
- The obstruction detection function has reversed the sunroof to the fully open slide or tilt position.

Press the control upwards and the sunroof will move to the position set on the control.

Note Do not press the control for more than 5 seconds as this may result in a sunroof that no longer operates correctly.

***SUNROOF* cont.**

WARNING

Keep hands and fingers clear of the sunroof tilting mechanism when operating it. The scissor action of the parts when moving may cause serious personal injury and/or may dismember fingers.



VESD243

WARNING

Fitting an aftermarket sunroof may void the warranty on your vehicle and could result in injury to the vehicle occupants in the event of an accident.

Cleaning and maintenance

WARNING

The tinted glass panel on the sunroof is heat and UV resistant. Ensure that due care is taken and that the directions below are followed when cleaning.

Regularly clean the glass, flocked seal and roof flanges with a moist, soft cloth.

RETAINED ACCESSORY POWER AND BATTERY SAVER

RETAINED ACCESSORY POWER (RAP)

The power windows will work when the key is in the ON or ACCESSORIES positions. Once the ignition is switched to LOCK, the RAP allows the power windows to continue to operate for up to 10 minutes. If a door is opened during this period, they will be deactivated.

Note The audio system will be deactivated only if the driver's door is opened.

BATTERY SAVER

To prevent the battery from discharging, the lamps for the glovebox*, boot (Sedan), cargo area* (Sportwagon) and the reading lamps* are switched off automatically approximately 10 minutes after the key is switched to LOCK.

Once the lamps have been deactivated, they are reactivated if any of the following occur:

- The ignition is switched on.
- The vehicle is unlocked.
- The boot (Sedan) is opened.
- The tailgate* (Sportwagon) is opened.
- The glovebox is opened.
- The reading lamps* are switched on.

NOTES

CHAPTER 4

Driving

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*The asterisk signifies equipment options not in all vehicles, model variants, engine options, optional equipment and Genuine Holden Accessories (and Parts).

SAFETY

BEFORE ENTERING THE VEHICLE

- Check that windows, mirrors and lamps are clean.
- Visually check tyre inflation.

  Note Check the tyre pressures each week.

BEFORE DRIVING OFF

1. Ensure that all doors are closed and secured.
2. Position your seat for comfortable driving.
3. Adjust rear view mirrors.
4. FASTEN SEATBELTS.
5. Check that the warning indicators illuminate when turning the key to start the engine. Refer to *Warning/reminder indications* in chapter 1A.

PARKING

1. Apply the park brake.
2. *Automatic transmission*:* Select position **P** (park).

   Manual transmission:* If pointing uphill or on flat ground, engage **1**st gear.

   If pointing downhill, engage **R** (reverse) gear.
3. Shut all windows.
4. Turn the ignition key to the LOCK position and remove the key.
5. Press the button on the key to lock all doors and to arm the alarm system when outside of the vehicle. Refer to *Locking* in chapter 2.

Note The engine fan may keep going for several minutes after the ignition has been switched off. This is normal.

WARNING

- Be careful where you park or drive. As with any vehicle, do not park or operate the vehicle in areas where combustible materials such as dry grass or leaves can come in contact with a hot exhaust system.
- Exhaust gases are hazardous, especially if they concentrate in closed rooms. Never leave the engine running in an enclosed space such as a closed garage or underground car park.

DRIVING PRECAUTIONS

RUNNING-IN

Your vehicle does not need an elaborate running-in procedure. But it will perform better in the long run if you follow these guidelines:

- Do not drive at any one constant speed, fast or slow, for the first 1000 km. Do not make full-throttle starts. Avoid downshifting to brake or slow the vehicle.
- During the first 1000 km, avoid using more than moderate acceleration in lower gears and avoid vehicle speeds above 110 km/h.
- Between the first 1000 km and 5000 km, heavy acceleration in lower gears can be used. Vehicle speeds above 110 km/h should be limited to five minutes per use.
- Avoid making hard stops for the first 350 km. During this time the new brake linings are not yet broken in. Hard stops with new linings can mean premature wear and earlier replacement. Follow this breaking-in guideline every time you get new brake linings.
- It is recommended that the new vehicle be driven for at least 1,500 km before towing. If the vehicle must tow before this do not exceed 80 km/h. The same applies if the vehicle is fitted with a new or reconditioned engine, transmission or rear axle.

REAR AXLE RUN-IN

If local statutory speed limits, road and traffic conditions permit driving the vehicle at its top speed, observe this additional run-in procedure.

Before driving the vehicle at its top speed for an extended time (more than approximately 5 minutes), the rear axle drive needs some preparation to settle in for maximum load. Observe the following points for the first 5,000 km:

- During the first 1,000 km, avoid using more than moderate acceleration in lower gears and avoid vehicle speeds above 110 km/h.
- Between 1,000 km and 5,000 km, heavy acceleration in lower gears may be used. Vehicle speeds over 110 km/h should be limited to 5 minutes per use.

BRAKES

The power assisted brakes fitted to the vehicle use vacuum from the engine when it is running. Therefore, never let the vehicle run down hills with the engine off, or coast after switching the engine off.

Position your seat so that you can push the brake pedal easily. Nothing should be under the brake pedal which could limit pedal travel, for instance, poorly fitting floor mats.

Continuous or heavy use will shorten the life of the brake pads.

POWER STEERING

The power steering fitted to the vehicle has been designed to reduce steering effort.

Note Take care not to hold the steering wheel fully turned when stationary (for example, when waiting before turning a corner) as this generates high operating temperatures and pressures within the system.

If power steering is not working, due to the engine stalling for example, the vehicle can still be steered. However, due to the much greater effort required to steer, it is recommended that you have the problem fixed as soon as possible.

DRIVING PRECAUTIONS cont.

LOADING THE VEHICLE

Loading the vehicle changes the mass distribution and therefore the handling when driving. After loading the vehicle, take care to become familiar with the vehicle's driving characteristics. Refer to *Loading the vehicle* in chapter 9.

LOOSE ARTICLES

Do not leave loose articles or luggage in the passenger compartment. Whenever possible, stow articles in the boot (Sedan) or cargo area (Sportwagon). Firmly secure loads stowed in the boot (Sedan) or cargo area (Sportwagon).

WARNING

Portable gas cylinders can leak, creating a risk of fire or explosion. As a precaution, ensure adequate ventilation when carrying gas cylinders. They must be restrained from rolling around, and where possible, placed in the boot (Sedan) or cargo area (Sportwagon) of the vehicle. It is recommended that if gas cylinders are frequently transported that a purpose-built carrying compartment be used. Transportation of gas cylinders is regulated by legislation in some countries.

MOBILE PHONES AND CB RADIOS

Mobile phones and CB radio equipment which use an integrated antenna may temporarily affect the vehicle's electronics (permanent damage is unlikely) when used inside the vehicle, due to the interference created when transmitting.

Therefore, use mobile phones and CB equipment that utilise an antenna fitted to the outside of the vehicle whenever possible.

If using mobile phones or CBs with an integrated antenna inside the vehicle, avoid using near the dashboard area, as some functions may be affected.

WATER CROSSING

Before crossing water, switch off the air conditioning.

Crossing deep water could damage the engine. It is recommended that the water depth be no more than 175 mm and speed be limited to a walking pace. Brakes may then need drying out; lightly apply the brakes while maintaining a slow forward speed, with a clear area ahead, until brake performance returns to normal.

TYRE GRIP

A decrease in tyre grip occurs when water, snow, ice, gravel or other materials are on the road. Adjust your driving to the road conditions.

When driving on wet or slushy roads, a wedge of water may build up between the tyre and road surface. This phenomenon, known as hydroplaning, may cause partial or complete loss of grip, which affects steering and braking. To reduce the possibility of hydroplaning:

- Reduce speeds during wet conditions.
- Replace tyres when tread wear indicators are visible. Refer to *Exterior checks* in chapter 7.
- Regularly check that tyres are properly inflated.

*SPORTWAGON REVERSE CAMERA**

WARNING

- Never rely solely on the reverse camera when reversing the vehicle.
- There is a blind spot that can not be sensed by the rear view camera.
- The reverse camera is not intended to replace the drivers judgement or attention toward the rear of the vehicle when reversing.
- Before entering the vehicle always check that the area around the vehicle is clear of obstacles and people.
- Always perform head checks and use the vehicle's mirrors when reversing.
- If the vehicle sustains any damage in the area of the reverse camera (rear number plate surround). The camera may become misaligned, contact your Holden Dealer.
- Always keep the camera lens free from dirt, snow or ice. Only use mild soap and water with a soft cloth to clean the lens.

The reverse camera system is designed to help the driver when reversing by displaying a view of the area behind the vehicle when reverse gear is selected.

The display screen may be on the internal rear view mirror or the infotainment screen depending on the audio system fitted to the vehicle.

The camera uses a special lens. The distance of the image that appears on the screen differs from the actual distance. The area displayed by the camera is limited. The camera does not display objects which are close to either corner of the bumper, forward of or higher than the camera. The area displayed on the screen may vary according to vehicle orientation or road conditions.

Cleaning

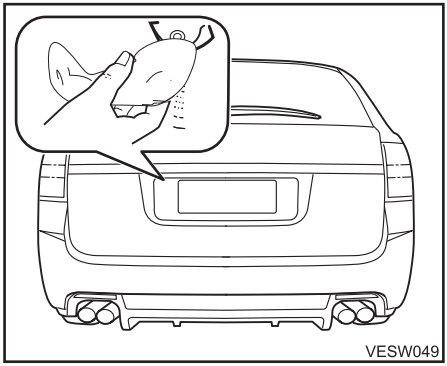
The reverse camera's lens will require regular cleaning to ensure optimum performance of the system.

The camera is located at the top of the rear number plate surround.

Carefully clean the camera lens using only a soft cloth, mild soap and water.

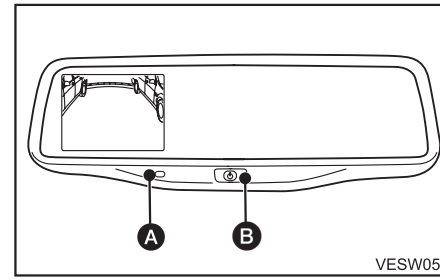
WARNING

Do not use abrasive cleaners or scouring pads as they could scratch the lens impairing the systems performance.


VESW049

SPORTWAGON REVERSE CAMERA cont.*

Operation
(level 1 & 2 audio system)



1. Turn the ignition to the ON position.
2. Enable the reverse camera system by pressing ⏻ button B. The operation lamp A will illuminate to indicate the reverse camera is enabled.

   To turn the reverse camera off, press and hold ⏻ button B. The operation lamp A will extinguish, indicating the system is disabled.
3. Select reverse gear.
4. The camera display appears on the left side of the rear view mirror.

Note

- The operation lamp A remains illuminated when the reverse camera is enabled regardless of the gear selected.
- The park assist* (refer further on in this chapter) warning tones will still be heard when the reverse camera is enabled.
- Objects of different heights will appear to be different distances from the vehicle.

The reverse camera display may turn off due to the following conditions:

- The system has timed out, after displaying for approximately 3 minutes. The operation lamp A flashes quickly indicating time out.

  Re-select reverse gear to view the camera display after time out has occurred.
- The system has reached its temperature limit. The operation lamp A flashes quickly indicating over temperature.

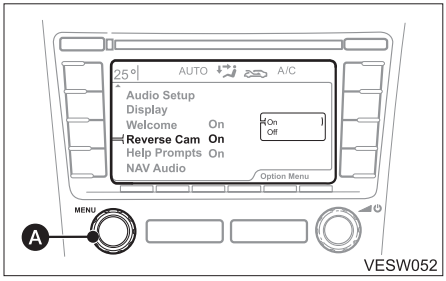
  The system will automatically reset once conditions return to normal. The operation lamp will stop flashing.
- The video signal from the camera is not present. The operation lamp flashes slowly. Contact your Holden Dealer.

The reverse camera system may be affected by the following:

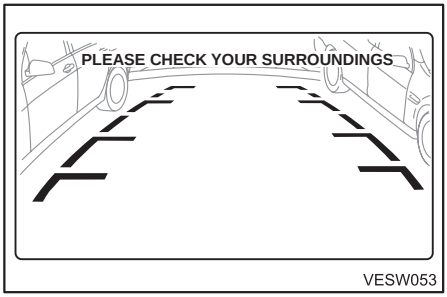
- If the area in the view of the camera is predominately white in colour the image on the display may be affected. Proceed with caution.
- If the sun or headlight beams are shining directly into the camera lens.
- If the vehicle sustains any damage in the area of the reverse camera (rear number plate surround). The camera may become misaligned. Contact your Holden Dealer.
- If snow, ice, mud or anything else has built up on the camera lens. Clean the camera lens. Refer to *Cleaning* on the previous page.
- If the system is subject to extreme temperature changes.

SPORTWAGON REVERSE CAMERA✻ cont.

Operation (level 3 audio system)



VESW052



VESW053

1. Turn the ignition to the ON position.
2. Enable the reverse camera system via the audio system controls.
   - Access the Option menu by pressing the Menu Control Dial Ⓐ when the audio system is switched on.
   - Highlight the menu item **Reverse Cam** by turning the Menu Control Dial Ⓐ clockwise.
   - Press the Menu Control Dial Ⓐ.
   - Turn the Menu Control Dial to switch between the setting On or Off.
   - Press the Menu Control Dial Ⓐ to confirm your setting.
   - To exit the menu, select and confirm the 'Exit' option or wait 8 seconds.
3. Select reverse gear.
4. The camera display appears on the infotainment screen.

Note

- Objects of different heights will appear to be different distances from the vehicle.
- The grid on the display is ONLY to used as a guide, as it does not represent a set distance from the vehicle.
- The reverse camera display when in operation will override all other displays.
- The reverse camera display may be temporarily interrupted when some audio system or climate control settings are changed.
- The Dual Park Assist (DPA)✻ animation on the infotainment screen (refer further on in this chapter) will not be seen when the reverse camera is enabled
- The park assist✻ (refer further on in this chapter) warning tones will still be heard when the reverse camera is enabled.

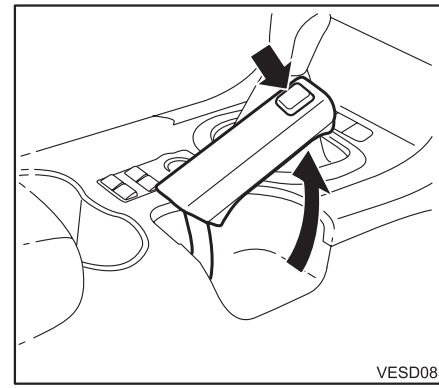
The reverse camera system may be affected by the following:

- If the sun or headlight beams are shining directly into the camera lens.
- If the vehicle sustains any damage in the area of the reverse camera (rear number plate surround). The camera may become misaligned. Contact your Holden Dealer.
- If snow, ice, mud or anything else has built up on the camera lens. Clean the camera lens refer to *Cleaning* on the previous page.

PARK BRAKE

OPERATING THE PARK BRAKE

The park brake lever is located between the front seats.



Applying the park brake

To apply, pull the lever straight up, without pressing the release button. When the ignition is switched on and the park brake is applied, the park brake warning lamp (!) on the instrument panel illuminates.

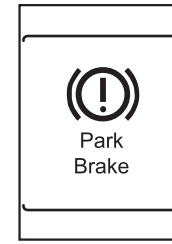
Releasing the park brake

To release, pull the lever slightly upwards, push in the release button on the top of the lever and while pressed, lower the lever all the way down.

WARNING

Never drive the vehicle with the park brake applied.

If attempting to drive off without releasing the park brake, a warning chime sounds and the **Park Brake** animation illuminates on the centre display of the instrument panel. The animation remains illuminated until:



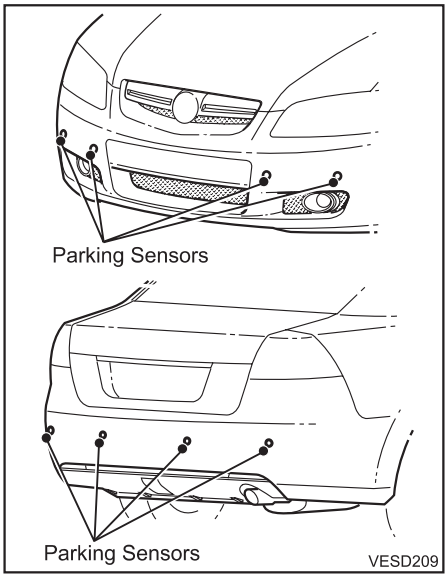
- the park brake is released,
- the vehicle is stationary or
- the **TRIP** button is pressed on the steering wheel.

The display then reverts to the original trip computer display.

*PARK ASSIST**

Depending on the model variant, the vehicle may be equipped with one of the following systems:

1. Rear Park Assist (RPA) – this system is able to detect and to indicate obstacles at the rear of the vehicle when reversing. The RPA consists of sensors on the rear bumper, a control unit and a speaker in the rear of the vehicle's interior.
2. Dual Park Assist (DPA) – this system is able to detect and to indicate obstacles in front and at the rear of the vehicle when manoeuvring. The DPA consists of sensors on the front and rear bumpers, a control unit and speakers in the front and rear of the vehicle's interior.



WARNING

- The driver is always responsible for taking care and attention while manoeuvring the vehicle. The Park Assist is only an aid and is neither intended to, nor able to take over any responsibility.
- The park sensors may not be able to detect all objects under every condition e.g. objects too close to the vehicle, objects above or below the sensors, or objects with a surface that absorbs ultrasonic waves. Additionally, some ambient conditions like ultrasonic waves or heavy rain can cause disruptive reflections from an object's surface. Such objects may not be detected.
- Always manoeuvre the vehicle slowly to allow yourself sufficient time to react. The warning tones will sound only while the vehicle's speed is below 15 km/h.

ACTIVATING

Note A malfunction is indicated if a confirmation tone does not sound or the **Park Aid Assist Fault** animation appears on the centre display. The Park Assist may not work properly during malfunction and you should manoeuvre the vehicle with special care. Check the sensors and clean them if necessary. If the malfunction persists, have the system checked by your Holden Dealer.

Rear Park Assist (RPA)*

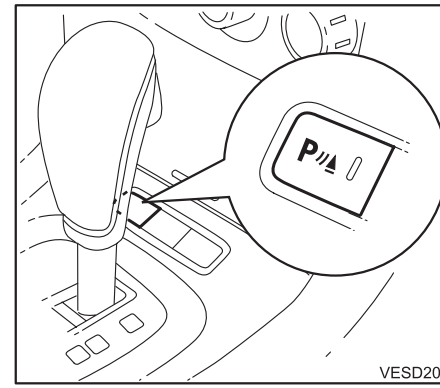
The RPA is activated automatically when:

- the ignition is switched on,
- the reverse gear is selected and
- the park brake is released.

A short single confirmation tone will sound from the rear speaker to confirm that the rear sensors are operational.

PARK ASSIST cont.*

Dual Park Assist (DPA)*



The DPA is activated automatically when:

- the ignition is switched on,
- a gear is engaged and
- the park brake is released.

Once the reverse gear is selected, a short single confirmation tone will sound from the rear speaker to confirm that both the rear and the front sensors are operational.

Once a forward gear is selected after reverse, the front and rear sensors will remain operational until the vehicle's speed exceeds 15 km/h.

If a forward gear is selected, only the front sensors are activated and the confirmation tone will sound from the front speaker.

Note

- The DPA automatically deactivates when the vehicle's speed exceeds 15 km/h.
- The DPA is reactivated automatically if changing from a forward gear to reverse gear or vice versa, or if the ignition is switched off and then on again.
- If the DPA has been manually deactivated, the DPA will not automatically activate when a forward gear is selected from vehicle start, or when the vehicle's speed is below 15 km/h, until the DPA has been manually reactivated.

To activate and deactivate the DPA manually, use the **P** button when the vehicle's speed is below 15 km/h. The light in the **P** button illuminates when the DPA is operational.

- To manually deactivate the DPA, when the vehicle's speed is below 15 km/h, press the **P** button once. The light in the button will turn off. The DPA will not reactivate again until the reverse gear is selected, or the DPA is manually reactivated.
- To manually reactivate the DPA, when the vehicle's speed is below 15 km/h, press the **P** button once. The light in the button will illuminate and the front sensors will activate.

Note If the light in the **P** button does not illuminate while the DPA is activated, make sure that the ignition is on, the vehicle is in gear and the park brake is not activated. If the light still does not illuminate, there may be a fault with the switch light or the system. If it flashes when the button is pressed, a malfunction is indicated. Have the system checked by your Holden Dealer.

PARK ASSIST* cont.

OPERATING

The range of the rear sensors is approximately 240 cm. A detected object will be indicated by a warning tone from the rear speaker.

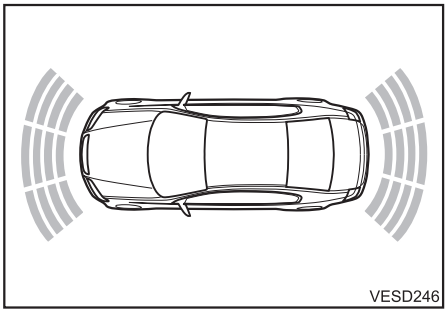
The range of the front sensors (vehicle's with DPA) is approximately 150 cm. A detected object will be indicated by a warning tone from the front speaker.

As soon as an object is detected within the range of the sensors, a warning tone sounds. The repetition rate of the tone will increase as the distance between bumper and object decreases. If the distance is about 30 cm or less, the warning tone will sound continuously.

The warning tone will stop after about 5 seconds if the distance to the object remains constant. The warning tone will stop immediately if the distance to the object increases.

On vehicles with DPA, when reverse gear is selected and the rear and the front sensors simultaneously detect any objects, only the closest object will be indicated. If two objects of the same distance are detected, the object at the rear will be given priority.

An animation of the Park Assist is shown on the Infotainment screen* when the sensors are activated. The detection range of the rear sensors and, on vehicles with DPA, the front sensors are illustrated. If an object enters the range of the sensors, the appropriate sector on the display will illuminate green. When the object comes closer, additional sectors will illuminate and the colour of these sectors will change to yellow, then to orange and finally to red.


VESD246

Note

- When reverse is selected the Park Assist animation is shown on the infotainment screen*.
- When drive is selected (vehicles with DPA) the Park Assist animation is shown only when the sensors detect an object and the vehicle's speed is below 15 km/h.
- To assist in hearing the warning tones while manoeuvring, mute the audio system by pressing the **MUTE** button on the steering wheel.
- While manoeuvring, sometimes a short tone may be heard when there are no objects or obstacles visible to the driver. This can be due to e.g. ground reflections, children or animals. In such cases, be especially careful.
- For efficient operation, keep the sensors in the bumper free from dirt, scratches, grime, ice, frost and snow. To avoid damaging the sensors, do not use hard or sharp objects to clean them.

Objects attached to the vehicle

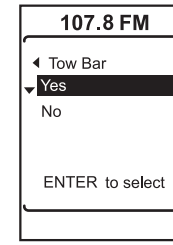
When any device is attached to the rear of the vehicle, e.g. a trailer or a bicycle rack, the sensors will detect this as an attached object.

Note If an attached object is detected, the Park Assist will deactivate automatically and completely about 10 seconds after the vehicle's forward speed exceeds 15 km/h.

The Park Assist will be reactivated automatically when the object is removed and the ignition is switched off and then on again and the vehicle's forward speed exceeds 15 km/h.

PARK ASSIST cont.*

Adjustment for a tow bar



When a tow bar is fitted, the rear park sensors need adjustment to allow for the protrusion of the tow ball tongue/neck.

- Enter the Customisation menu and select the feature **Tow Bar**.
- Select **Yes** and press the ENTER button if the tow ball tongue/neck is attached.
- Select **No** and press the ENTER button if the tow ball tongue/neck is removed.

Refer to *Customisation menu* in chapter 1A.

Note

- This adjustment is for Holden approved tow bars fitted by your Holden Dealer. If a different tow bar is fitted, the system may detect it as an attached object and will be deactivated. Refer to *Objects attached to the vehicle* previously in this section.
- The Holden Dealer fitted accessory, Rear Park Assist (RPA), does not require adjustment for tow bar tongue removal.

ENGINE STARTING

1. Ensure that the park brake is firmly applied and release it only after you have started the engine and are ready to drive off.
2. *Manual transmission*:* Fully depress the clutch pedal to the floor, shift the gear lever to the Neutral position then crank the engine. The clutch pedal can now be released.

   Automatic transmission:* Move the transmission gear selector to the position **P** (park) or **N** (neutral). The engine will not start if the transmission gear selector is in any other position.
3. For cold or hot starting:

   Turn the key to the START position momentarily and then release it, as the engine starts automatically. The key automatically returns to the ON position when released.

   Note

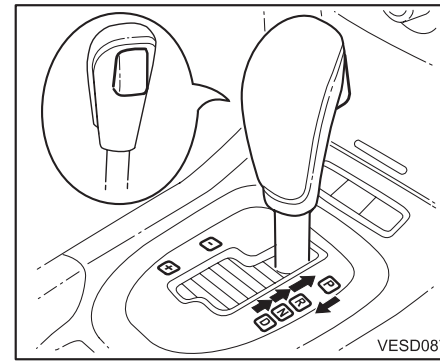
   - On manual transmission vehicles, the clutch must be fully depressed while turning the key or the vehicle cannot be started.
   - Do not depress the accelerator pedal while starting the engine. This would only increase cranking time and will not help the engine to start.
   - Do not subject the engine to high load conditions such as full throttle acceleration or high speeds until it has reached normal operating temperature (as indicated on the instrument panel temperature gauge). Failure to comply may cause premature engine wear or engine damage.

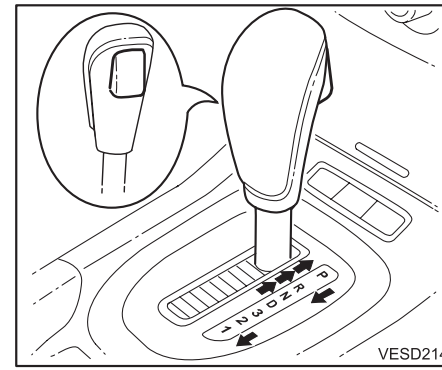
TRANSMISSION OPERATION

*AUTOMATIC TRANSMISSION**

Gear selector lever

Press the select button on the front of the transmission gear selector lever to move into any position indicated by the arrows.



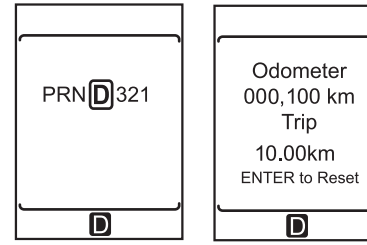


Gear display

When the position of the transmission gear selector is changed, an animation is shown on the instrument panel centre display.

The selected gear is magnified and changes according to the selector lever's movement. The gears displayed are **P R N D 3 2 1**.

The animation appears for 2 seconds after the gear is selected and then it reverts to the original trip computer display.



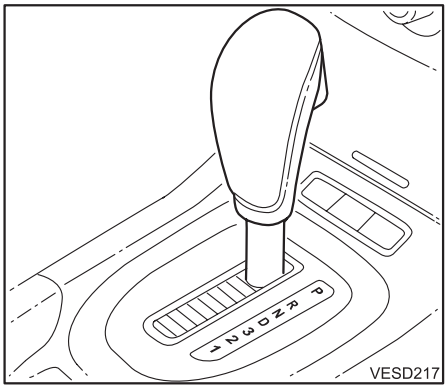
The lever position indicated on the bottom of the display remains on, indicating the gear currently selected.

Note If any warnings are active on the display, the animation will not be shown and only the indication on the bottom of the display changes when the transmission gear selector is moved.

For information about the display in A/S mode (6 speed transmission) refer to *Active Select (A/S) Mode* further on in this chapter.

TRANSMISSION OPERATION cont.

4 speed transmission* selector lever positions



Note The engine will not start unless the transmission gear selector is in position **P** (park) or **N** (neutral).

P (park) In this position, the driven (rear) wheels are locked to prevent the vehicle from moving. To park the vehicle, always select this position and apply the park brake before leaving the vehicle.

Before selecting position **P**, have the vehicle stationary and pause for a moment, to allow the transmission to adjust to the stationary vehicle.

With the selector lever in this position the engine can be started.

WARNING

- Selecting position **P** while the vehicle is still moving can cause damage to the transmission.
- Do not press the accelerator pedal with the brakes on in any gear except position **P** (park) or **N** (neutral). This will overheat the transmission.

R (reverse) The reverse gear will be engaged when selecting this position and the reverse lamps will illuminate when the ignition is switched on.

Note Make sure the vehicle is stationary before moving the selector lever to or out of position **R**.

After selecting **R**, pause for a moment before accelerating to allow the transmission to engage reverse gear.

N (neutral) This is the out-of-gear position, i.e. the transmission is disconnected from the driveline. If necessary, the vehicle can be moved without the engine running, e.g. to be towed or pushed. Refer to *Towing a disabled vehicle* in chapter 6.

With the selector lever in this position a stalled engine can be restarted while the vehicle is still moving.

WARNING

- To prevent the vehicle from moving when position **N** is selected, always apply the park brake, depress the foot brake or use suitable chocks to block the wheels.
- Do not coast the vehicle in position **N** (neutral) – this decreases your control and ability to accelerate quickly in an emergency.

TRANSMISSION OPERATION cont.

D Used for general driving. The transmission can shift between all forward gears as required. It is recommended that **D** be selected with Sport shift mode when towing on the highway at speeds over 80 km/h.

Note If on a steep downhill gradient, the transmission may not shift up from 1st to 2nd gear depending on the conditions. This will provide some engine braking to assist the driver and should not cause alarm. Normal upshifting will resume when the vehicle is on more level ground or the driver accelerates.

3 Can be selected to provide engine braking in 3rd gear. The transmission will only shift between 1st, 2nd and 3rd gears. It is recommended that **3** be selected with Sport shift mode when towing in the city at speeds under 80 km/h.

2 Can be selected to provide engine braking in 2nd gear. The transmission will only shift between 1st and 2nd gears. Do NOT select **2** at more than 120 km/h.

1 Can be selected to provide engine braking in 1st gear.

Note The transmission will electronically 'lock-out' 1st gear unless the vehicle speed is less than 55 km/h when **1** is selected. Use this position on a steep gradient, when a strong braking effect is needed.

Note It is recommended that the cruise control or Sport shift mode be used for towing (4 speed).

WARNING

Do not use the accelerator pedal to hold the vehicle stationary on an uphill slope. Use the brakes.

Warm up mode

At temperatures of approximately 5 °C or below, the transmission may shift up later than normal until the engine reaches operating temperature (approximately 5 minutes). This helps the engine to warm up quickly to improve heater performance.

TRANSMISSION OPERATION cont.

SPORT SHIFT MODE

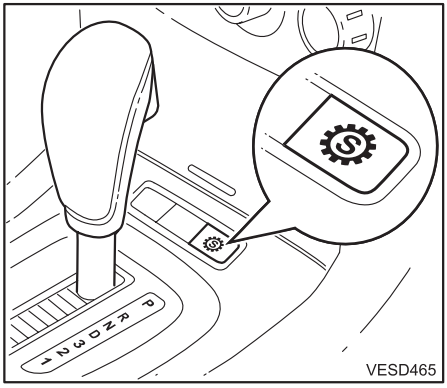
4 speed transmission (select the ⚙ button)

Sport shift mode can be selected where maximum engine power and transmission responsiveness is required.

When operated in Sport shift mode, the transmission will delay upshifts and allow earlier downshifts, so that lower gears/higher engine speeds are used for most driving conditions improving vehicle performance and acceleration.

The ⚙ button is located in front of the gear selector lever. Press the ⚙ button to activate Sport shift mode. Press the ⚙ button again to return to normal shift mode.

Note When the ignition is switched off then on again, sport shift mode will be deactivated and normal shift mode will be selected automatically.



The **Sport Shift** animation illuminates in the centre display when Sport shift mode is selected. After two seconds the display reverts to the previous trip computer display.

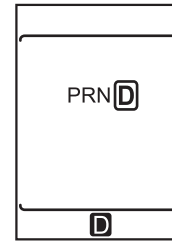
SPT is shown on the bottom of the display as long as the Sport shift mode is selected.

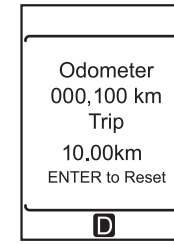




TRANSMISSION OPERATION cont.

Gear display





When the position of the transmission gear selector is changed, an animation is shown on the instrument panel centre display.

The selected gear is magnified and changes according to the selector lever's movement. The gears displayed are **P R N D**.

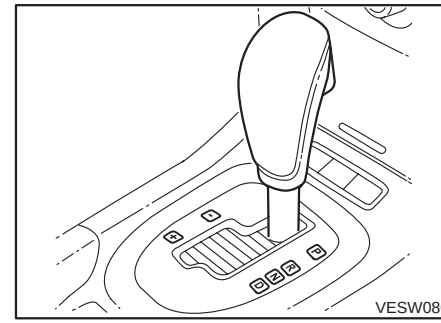
The animation appears for 2 seconds after the gear is selected and then it reverts to the original trip computer display.

The lever position indicated on the bottom of the display remains on, indicating the gear currently selected.

Note If any warnings are active on the display, the animation will not be shown and only the indication on the bottom of the display changes when the transmission gear selector is moved.

For information about the display in A/S mode (6 speed transmission) refer to *Active Select (A/S) Mode* further on in this chapter.

6 speed transmission* selector lever positions



Note The engine will not start unless the transmission gear selector is in position **P** (park) or **N** (neutral).

P (park) In this position the driven (rear) wheels are locked to prevent the vehicle from moving. To park the vehicle always select this position and apply the park brake before leaving the vehicle.

Before selecting position **P**, have the vehicle stationary and pause for a moment, to allow the transmission to adjust to the stationary vehicle.

With the selector lever in this position the engine can be started.

WARNING

- Selecting position **P** while the vehicle is still moving can cause damage to the transmission.
- Do not press the accelerator pedal with the brakes on in any gear except position **P** (park) or **N** (neutral). This will overheat the transmission.

R (reverse) The reverse gear will be engaged when selecting this position and the reverse lamps will illuminate when the ignition is switched on.

Note Make sure the vehicle is stationary before moving the selector lever to or out of position R.

After selecting **R**, pause for a moment before accelerating, to allow the transmission to engage the reverse gear.

TRANSMISSION OPERATION cont.

N (neutral) This is the out-of-gear position, i.e. the transmission is disconnected from the driveline. If necessary, the vehicle can be moved without the engine running, e.g. to be towed or pushed. Refer to *Towing a disabled vehicle* in chapter 6.

With the selector lever in this position a stalled engine can be restarted while the vehicle is still moving.

WARNING

- To prevent the vehicle from moving when position **N** is selected, always apply the park brake, depress the foot brake or use suitable chocks to block the wheels.
- Do not coast the vehicle in position **N** (neutral) – this decreases your control and ability to accelerate quickly in an emergency.

D (drive) This is the normal driving position. The transmission automatically selects the appropriate gear according to the current load and driving conditions.

After selecting **D** from **P** or **N**, pause for a moment before accelerating, to allow the transmission to engage the forward gear.

+/– (A/S) While in Sport shift mode, move the selector lever to the **+** or **–** position to enable Active Select (A/S) mode.

To shift up a gear, briefly pull the lever rearwards (**+**) and release it.

To shift down a gear, briefly push the lever forwards (**–**) and release it.

Refer to *Active Select (A/S) mode* further on in this chapter.

Note

- It is recommended that the cruise control or Sport shift mode be used for towing. Active select (A/S) mode may also be used under light load conditions (6 speed).
- Positive torque matching may occur with closed throttle downshifting in any shift mode. This feature uses engine torque to smooth downshifts. The driver may notice a small increase in engine speed during some downshifts.

WARNING

Do not use the accelerator pedal to hold the vehicle stationary on an uphill slope. Use the brakes.

Powertrain braking

When driving on steep descents in **D** (drive) or Sport shift mode where frequent braking is required, the transmission will downshift a gear to help hold vehicle speed and reduce brake wear. If the driver continues to press the brake, the transmission will downshift until **3** (third) gear is reached.

If the brake is released for some time, the transmission will upshift a gear. If the road levels out and the accelerator pedal is pressed, the transmission will upshift until the appropriate gear is reached.

Active Select (A/S) mode can be switched on to override the feature and gain complete control of shifts if desired.

TRANSMISSION OPERATION cont.

SPORT SHIFT MODE

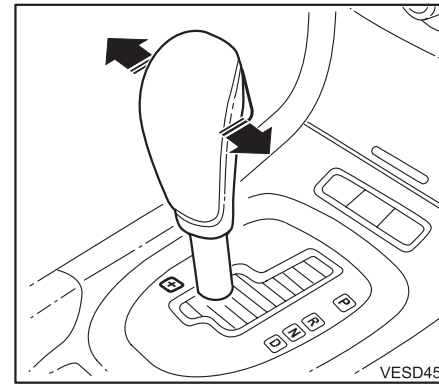
6 speed transmission

Sport shift mode can be selected where maximum engine power and transmission responsiveness is required.

When operated in Sport shift mode, the transmission will delay upshifts and allow earlier downshifts, so that lower gears/higher engine speeds are used for most driving conditions, improving vehicle performance and acceleration.

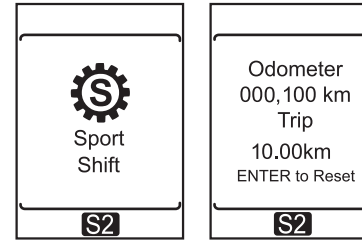
To activate Sport shift mode, move the gear selector lever to position **D**, then push the selector lever to the left quadrant to select Sport shift mode. To return to normal shift mode, move the selector lever right to the **D** position.

Note While in Sport shift mode, do not move the selector lever to **+** or **-**, otherwise Active select mode will be enabled.



The **Sport Shift** animation illuminates in the centre display when Sport shift mode is selected. After two seconds the display reverts to the previous trip computer display.

S and the currently selected gear is shown on the bottom of the display as long as the Sport shift mode is selected.



With Sport shift mode, there is a further performance feature called Performance Mode Lift Foot (PMLF). The feature is activated automatically when sports oriented driving is detected, based on cornering and on/off throttle application. PMLF allows the transmission to hold the current gear instead of upshifting when the throttle is lifted. This mode will also enable shifts to a lower gear at higher vehicle speeds and delay upshifts to a higher gear for sportier vehicle performance.

TRANSMISSION OPERATION cont.

NORMAL SHIFT MODE

Normal shift mode is recommended for normal or freeway driving, as it provides optimum fuel economy. When the ignition is switched on, normal shift mode is selected automatically. When normal shift mode is selected (Sport shift mode off), the **Normal Shift** animation illuminates in the display for two seconds and the display then reverts to the original trip computer display.



4 speed



6 speed

Note Whenever the vehicle is restarted, normal shift mode will be selected automatically.

ACTIVE SELECT (A/S) MODE*

A/S mode (6 speed only) allows the driver to select gears manually, so that the vehicle can be driven in a sport oriented manner. It can also provide engine-braking by selecting the appropriate lower gear on a steep downhill grade.

To enable the Active Select (A/S) mode move the selector lever to position **D** then push the lever to the left quadrant.

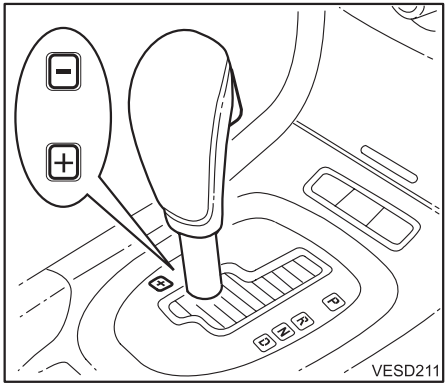
Note The selector lever must be moved to the **+** or **–** position to enable Active Select mode.

To shift up a gear, briefly pull the lever rearwards (**+**) and release it.

To shift down a gear, briefly push the lever forwards (**–**) and release it.

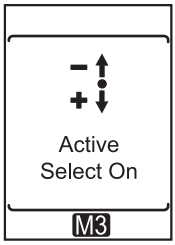
After changing the gear and releasing the selector lever it returns to it's original position in the centre of the left quadrant.

Note Do not hold the selector lever in the **+** or **–** position.



When A/S mode is enabled, the **Active Select On** animation illuminates in the centre display on the instrument panel. After 2 seconds it reverts to the original trip computer display.

On the bottom of the display, **M** and the currently selected gear is shown as long as A/S mode is selected.

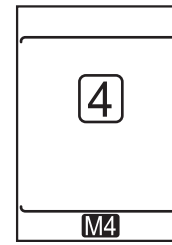


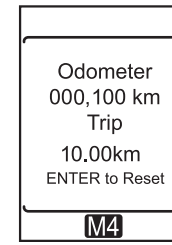


TRANSMISSION OPERATION cont.

Active Select* (A/S) mode cont.

When shifting up or down, the selected gear (**1**, **2**, **3**, **4**, **5**, or **6**) is also animated in the centre display. This gear display appears for 2 seconds after the gear is selected and then reverts to the original trip computer display.





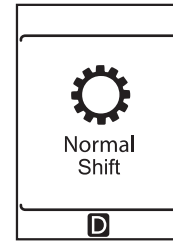
Note

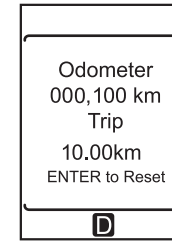
- The transmission will shift to a selected gear only if the engine speed is within a suitable range. If the engine speed is not suitable, the displayed gear will not change and the message **Shift Denied** will be displayed, indicating that the transmission has not shifted gears.
- If the engine speed becomes too low for the currently selected gear, the transmission will automatically shift down, although A/S mode is still selected. This is to prevent the engine from stalling.
- While in Active Select mode, 2nd or 3rd gear starts (V8) or 2nd gear starts (V6) can be selected from a standing start. This is useful for gentle acceleration on slippery surfaces.

To disable A/S mode and return to automatic mode, push the selector lever to the right quadrant in position **D**.

When A/S mode is disabled, the **Normal Shift** animation illuminates in the centre display on the instrument panel. After 2 seconds it reverts to the original trip computer display.

On the bottom of the display the currently selected lever position illuminates again.





TRANSMISSION OPERATION cont.

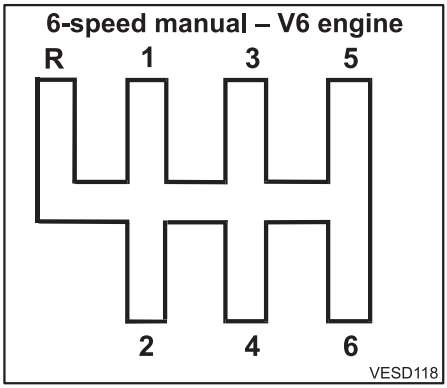
*MANUAL TRANSMISSION**

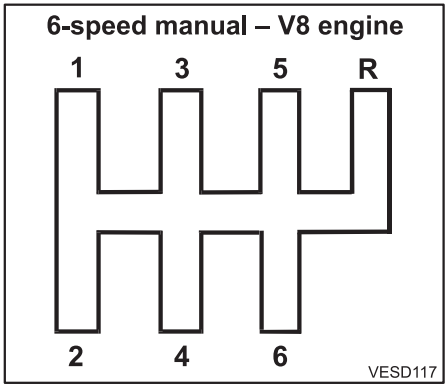
Shift patterns

The manual transmissions fitted to vehicles with V6 and V8 engines have six forward gears and a reverse gear.

The shift pattern illustrated is also found on the top of the gear shift lever.

When selecting **R** (reverse), shift the gear lever sideways against spring pressure in order to engage the gear.





Operating notes

- When shifting from one gear to another, be sure to depress the clutch pedal fully to avoid damage to the transmission.
- Never attempt to engage reverse gear while the vehicle is still moving. Ensure a slight pause between pressing the clutch pedal and moving into reverse gear to allow all the rotating components to stop. Whenever reverse gear is selected with the ignition on, the reversing lamps illuminate.
- Shift the gear lever with a moderate effort to allow time for the transmission synchromesh to work properly.
- For vehicles fitted with a 3.6L Spark Ignition Direct Injection (SIDI) V6 engine; when on level roads, in an unladen condition, it is permissible to drive off in 2nd gear, in the interest of fuel economy.
- To avoid damage to the clutch, do not drive with your foot resting on the clutch pedal.
- When stopped on an incline, do not hold the vehicle stationary by slipping the clutch. Use the park brake or foot brake.
- When climbing steep grades, change down to a lower gear before the engine starts to labour. To maintain safe speeds on a steep downgrade and to reduce brake wear and overheating, shift into a lower gear before starting the descent.
- Do not over rev the engine when shifting down to a lower gear.
- **V6** 5th gear provides direct drive, whereas 6th gear provides overdrive.
  V8 4th gear provides direct drive, whereas 5th and 6th gears provide overdrive.

ACTIVE SAFETY SYSTEMS

ANTI-LOCK BRAKE SYSTEM

Monitoring

The Anti-lock Brake System (ABS) continuously monitors the vehicle's braking system and prevents the wheels from locking up when braking. It starts to regulate the braking as soon as a wheel shows a tendency to lock. The ABS allows maximum braking effort while full steering control is retained, even in the event of panic braking.

WARNING

Do not let this special safety feature tempt you into taking risks when driving. Traffic safety can only be achieved by adopting a responsible driving style. You should always adjust the vehicle's speed to suit road and traffic conditions. Always maintain an adequate distance to the vehicle in front of you.

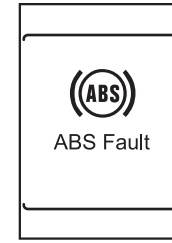
Operation

When active, ABS operation is noticeable by pulsing of the brake pedal and the noise of the regulation process. To achieve optimum braking, keep the brake pedal pressed fully throughout the braking process. Use this as a reminder to match the vehicle's speed to the road conditions, even though ABS is keeping control of the braking.

Note In an emergency braking situation, keep full force on the brake pedal without pumping it. Pumping the brake pedal can reduce brake efficiency when ABS is controlling the braking.

The (ABS) warning lamp briefly illuminates when the ABS performs a self check each time the ignition is switched on. This self-check may be audible.

If the (ABS) warning lamp (ABS off) in the instrument panel does not extinguish or illuminates when driving, a malfunction in the system has occurred. Additionally the ABS Fault animation will illuminate in the centre display.



Note The vehicle's brake system remains operational, but without ABS assistance. Have your Holden Dealer check the system as soon as possible.

The **ABS Fault** animation is displayed until the **TRIP** button on the steering wheel is pressed. However, the (ABS) warning lamp remains illuminated until the problem is rectified.

ACTIVE SAFETY SYSTEMS cont.

ELECTRONIC STABILITY PROGRAM (ESP®)

Operation

The Electronic Stability Program (ESP®) is an advanced feature that works in conjunction with the vehicle's Anti-lock Braking System (ABS) and includes the Traction Control System (TCS). When required, the ESP® improves driving stability in any driving situation.

The ESP® assists in maintaining vehicle stability by providing intervention when the vehicle's grip level is exceeded (such as a sudden lane change, slippery or unexpected road conditions). The ESP® processes information from the various vehicle sensors and can intervene by altering engine power and/or braking on specific wheels as required. This can improve the vehicle's steering control and power delivery, on wet or slippery roads, particularly on snow and ice.

WARNING

Do not let this special safety feature tempt you into taking risks when driving. Traffic safety can only be achieved by adopting a responsible driving style. The vehicle's speed should always be adjusted to suit road and traffic conditions.

Activation



When the ESP® is contributing to vehicle stability, the **ESP® Ctrl Assistance** animation is shown on the instrument panel centre display and **ESP® CTRL** illuminates at the bottom of the display.

This reminds you to match the vehicle's speed to the road conditions.

ESP® CTRL illuminates as long as the assistance is maintained. The **Stability Ctrl Assistance** animation is displayed in conjunction with **ESP® CTRL** until the **TRIP** button on the steering wheel is pressed. It then reverts to the original trip computer display.

Switching ESP® on and off

In certain circumstances, it may be helpful to disable the ESP®. For example, on steep gravel inclines, or if the vehicle is bogged, it may be possible to get more traction from a slightly spinning wheel.

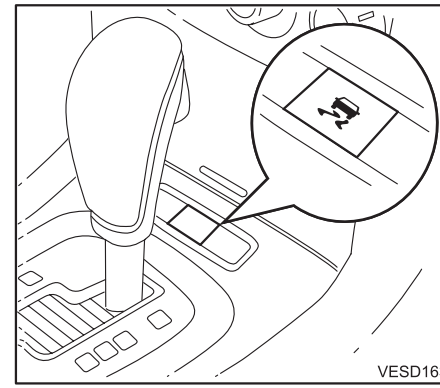
Note Whenever snow chains are fitted, the ESP® should be switched off, otherwise the ESP® might show unusual operating characteristics.

ACTIVE SAFETY SYSTEMS cont.

To switch the ESP® off (i.e. ESP® and TCS), press the button located in front of the transmission gear selector lever or gear shift lever, depending on the transmission fitted to your vehicle.

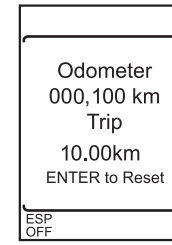
Press the button again to switch the ESP® back on.

The ESP® is automatically switched on each time the ignition is switched on.

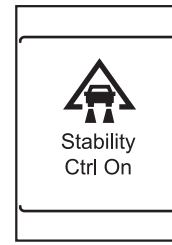


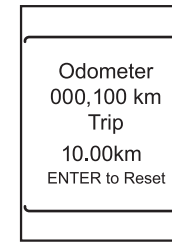
When pressing the button while the system is switched off, the **Stability Ctrl Off** animation is shown on the instrument panel centre display. After 2 seconds, the animation reverts to the original trip computer display. **ESP® OFF** illuminates at the bottom of the display as long as the ESP® is switched off.





When pressing the button while the system is switched on, **ESP® OFF** disappears and the **Stability Ctrl On** animation is shown on the instrument panel centre display. After 2 seconds, the animation reverts to the original trip computer display.

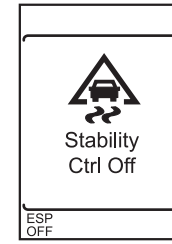




Malfunction indication

If pressing the button to switch off the system and the **Stability Ctrl Off** animation is not shown, or if the animation is shown when you did not switch off the system, a malfunction occurred and the system will not work. Contact your Holden Dealer to have the system checked.

If the **Stability Ctrl Off** animation is shown, press the **TRIP** button on the steering wheel to return to the trip computer display. **ESP® OFF** will illuminate at the bottom of the display and stay illuminated until the problem is rectified.



ACTIVE SAFETY SYSTEMS cont.

Electronic Brake Assist (EBA)

The EBA is incorporated into the ESP® system and detects an emergency braking situation. It recognises how rapidly the brake pedal is applied and automatically provides maximum braking efficiency as long as the brake pedal is depressed. Additionally, the EBA initiates ABS earlier, shortening the stopping distance required.

WARNING

Do not let this special safety feature tempt you into taking risks when driving. Traffic safety can only be achieved by adopting a responsible driving style. The vehicle's speed should always be adjusted to suit road and traffic conditions. Always maintain an adequate distance to the vehicle in front of you.

ADD ON EQUIPMENT

SNOW CHAINS

Due to lack of clearance, snow chains cannot be fitted to vehicles equipped with the following wheel and tyre configurations:

- 245/45R18 18 x 8
- 245/40R19 19 x 8
- 245/35R20 20 x 8

If these vehicles need to be driven in the snow, the owner should consider changing to the following wheel and tyre configurations:

- 225/60R16 16 x 7 (suitable for V6 vehicles only)
- 225/55R17 17 x 7 (suitable for V6 vehicles only)

Snow chains should be fitted only on the rear (drive) wheels.

Depending on design, large hub caps may contact parts of the chain. If so, remove the hub caps. Any valve extensions should also be removed.

WARNING

- Snow chains may only be used at speeds up to 50 km/h. Snow chains should only be used for short distances if the roads are not snow covered. The hard road surface causes rapid wear and the chain may break. Snow chain links should not be thicker than 13 mm and the clasp should be well away from the bodywork. Thicker chains may damage the vehicle body.
- Do not use snow chains on temporary spare wheel*.

Ensure that tyre pressures are as recommended on the tyre placard. Refer to *Tyres* in chapter 7.

Note Whenever snow chains are fitted, the ESP® should be switched off, otherwise the ESP® might show unusual operating characteristics. Refer to *Electronic Stability Program (ESP®)* previously in this chapter.

MUDFLAPS*

Mudflaps should be fitted if the vehicle is driven extensively on unsealed roads.

Note Take care when reversing to avoid trapping a mud flap between a tyre and a gutter.

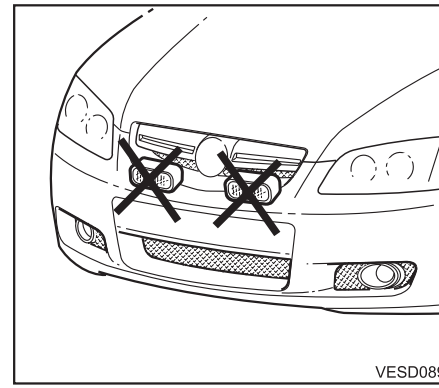
FITTING DRIVING LIGHTS OR INSECT SCREENS

When fitting these accessories, be careful not to restrict air flow otherwise engine overheating and/or poor air conditioning performance may result.

Nothing should be fitted over the upper or lower air intakes at the front of the vehicle, as this could affect engine cooling.

WARNING

In high load and high temperature applications (e.g. towing) no objects should be fitted over the upper or lower air intake at the front of the vehicle, as this could affect cooling.



ADD ON EQUIPMENT cont.

FITTING ROO/NUDGE BARS

If a roo/nudge bar is to be fitted, it is critical that the Holden approved roo/nudge bar be used. Other types ***must not*** be fitted. The Holden roo/nudge bar is available from your Holden Dealer and has been compatibility tested with the vehicle's design, including the Holden airbag system.

WARNING

Fitting other types of roo/nudge bars may affect crash performance, airbag performance and engine cooling.

Roo/nudge bars should not be fitted to vehicles operating in suburban areas, as they increase the risk of injury to a pedestrian in the event of a collision. Roo/nudge bars are only recommended for country/outback areas, where additional protection from straying animals is required. Please remember that defensive driving and limiting driving speed to the road conditions is always the best approach, particularly where road side signs indicate wildlife is abundant.

NOTES

CHAPTER 5

Fuel

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Emission control 5-11

Reducing fuel consumption 5-12

*The asterisk signifies equipment options not in all vehicles, model variants, engine options, optional equipment and Genuine Holden Accessories (and Parts).

FUEL

EXHAUST WARNING – CARBON MONOXIDE POISONING

Exhaust gases can produce carbon monoxide, a dangerous gas, which can cause unconsciousness and even death to both humans and animals.

Gases could be inhaled if the exhaust system on your vehicle is faulty.

To protect against exhaust gases entering the vehicle, the exhaust system and body should be inspected:

- each time the vehicle is serviced,
- whenever a change is noticed in the sound of the exhaust system,
- whenever the exhaust system, underbody or rear of the vehicle is damaged.

Take the vehicle to your Holden Dealer if you think the vehicle needs inspecting for any of the above reasons.

Do not sit (or leave children or pets) in a parked vehicle for any extended period of time with the engine running. Do not run the engine in an enclosed area (such as the garage) any longer than is needed to move the vehicle.

Driving with the boot (Sedan) or tailgate (Sportwagon) open is not recommended. If you must travel with the boot (Sedan) or tailgate (Sportwagon) open, close all windows, ensure that the heater controls are set to outside (rather than recirculate) with air directed to the face and the fan on the highest speed. Do not exceed 50 km/h.

FUEL WARNING

- Fuel is extremely flammable and highly explosive.
- Always switch off the engine of the vehicle and any mobile phones when refuelling.
- Do not smoke or allow open flames or sparks near the vehicle when refuelling.
- If fuel fumes are smelt while driving, the cause should be found and corrected without delay by your Holden Dealer.

WARNING – FUEL ADDITIVES

Various additives are used in the formulation of good quality fuel and the use of supplementary additives in fuel is not required unless specified by Holden. Under no circumstances should fuel containing the manganese additive known as MMT (methyl cyclopentadienyl manganese tricarbonyl) be used, as this additive is known to cause contamination of catalytic converters, spark plugs and the malfunction of On-Board-Diagnostic (OBD) systems. The use of fuel additives that are not recommended by Holden may affect your New Vehicle Warranty to the extent that Holden considers that the additives affect the specifications and quality of the vehicle.

FUEL cont.

WARNING – USE OF FUEL CONTAINING ETHANOL

When purchasing such fuel, we recommend that the vehicle be operated on fuel containing no more than 10% ethanol. Purchasing fuel from a reputable fuel retailer may reduce the risk of purchasing fuel with more than 10% ethanol or fuel which contains abnormal fuel properties. Under no circumstances should fuel containing more than 10% ethanol be used. Use of such fuels may result in engine malfunction, starting and operating difficulties, and materials degradation. These adverse effects could result in permanent damage to the vehicle and personal injury. It is also important to note that when ethanol blends are used, fuel consumption can be expected to increase due to the lower energy content of ethanol.

The use of any fuel, other than the fuel specified on the following page, may seriously damage the vehicle and may void the warranty. Only clean fuel of good quality should be used. The use of fuel containing more than 10% ethanol may also affect your New Vehicle Warranty to the extent that Holden considers that the fuel affects the specifications and quality of your vehicle.

REFUELLING

Always fill the fuel tank at the intermediate or fast fill rate. Do not add any more fuel after the fuel filler first clicks off or fuel blows back – this allows room for the fuel to expand inside the tank. Only trickle-fill fuel tanks when the vehicle is to be driven for more than 50 km immediately after the tank is filled. However, this is not recommended on days over 30 °C.

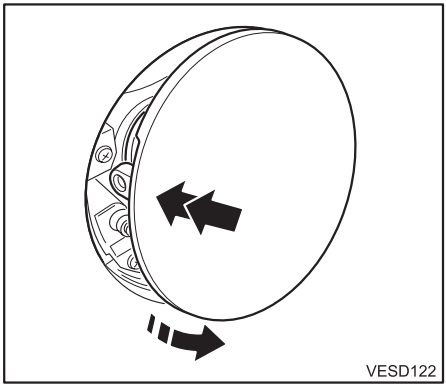
Wipe off any overflowing fuel immediately from the vehicle; spray or splash with water (replace the fuel cap and close the fuel opening before spraying with water).

Fuel filler flap

When the vehicle is unlocked, push on the rear edge of the fuel filler flap located on the right hand side of the vehicle, to pop the flap open.

To close, push the flap in again.

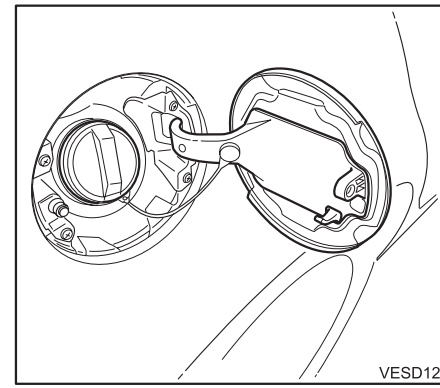
Note The fuel filler flap will not open when the vehicle is locked.



FUEL cont.

Fuel cap

The fuel cap, under the fuel flap, is a ratchet type cap that is tethered to the vehicle. To open, turn the cap anticlockwise. After refilling, tighten the cap clockwise until a clicking noise is heard and then close the fuel flap.



Tank capacity

Refer to *Specifications* in chapter 8.

Fuel type

Use unleaded petrol of regular 91 Research Octane Number (RON) rating or higher. Use of Premium unleaded petrol (95 RON or higher) may provide a small improvement in performance and fuel economy.

LPG conversion

For specific details of the approved Holden LPG system please refer to *Dual fuel LPG* further on in this chapter.

DUAL FUEL LPG* (SEDAN ONLY)

EMERGENCY PROCEDURES

WARNING

- LPG is heavier than air and if not dispersed tends to collect in low-lying areas.
- **Accident or fire**

  Call the emergency fire services to the scene and keep people away from the vehicle.
- **While filling**

  Ensure that there is no gas leakage. If a leak is detected while filling the vehicle stop filling the vehicle, notify the filling station operator of a potential problem with the pump. If the odour still persists when disconnected, carry out the emergency procedure steps 1 through 6 outlined below. Select petrol operation with the fuel selector switch and take the vehicle to nearest authorised IMPCO® LPG repairer or your Holden Dealer for advice.

  Note If frost is present do not touch the area until the frost has dissipated.
- **Suspected gas leak**

  Carry out the emergency procedure steps 1 through 6. Once the steps have been followed and the odour is no longer present, select petrol operation with the fuel selector switch and take the vehicle to the nearest authorised IMPCO® LPG repairer or your Holden Dealer for advice.

Manual service valve

LPG has an odour that enables any leaks in the vehicle's LPG system to be detected, should this odour be detected in or around the vehicle or in the event of an accident, fire or other abnormal circumstance:

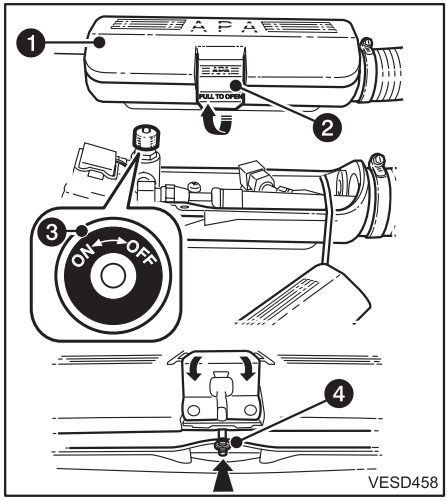
1. Turn the vehicle's ignition to the OFF position.
2. Open the boot.
3. Open the valve box cover ❶.

   Pull the latch ❷ to the upright position.

   Lift the valve box cover up until it disengages from the tank.
4. Turn the service valve ❸ on the LPG tank clockwise to the OFF position. Refer to illustration.
5. Close the valve box cover.

   Engage the hinge of the valve box cover.

   With the latch ❷ in the upright position, engage the pin ❹ in the slot. Push the latch ❷ to the locked position.
6. Contact the nearest authorised IMPCO® LPG repairer or your Holden Dealer for advice.



DUAL FUEL LPG* (SEDAN ONLY) cont.

DUAL FUEL (LPG) INTRODUCTION

Congratulations on purchasing a Holden 'Dual Fuel' vehicle. Not only will you appreciate the savings in fuel costs, but as importantly you will reap the benefit of a fully integrated LPG engine management system. Your Holden Dual Fuel System will maximise your vehicle's performance in both fuel modes while minimising exhaust emissions and retaining vehicle reliability and performance.

It is important to understand that the engine in your 'Dual Fuel' Holden vehicle will always start on petrol and if LPG is selected on the Dual Fuel control switch the vehicle will automatically transfer over to LPG when the engine has warmed up sufficiently.

The Holden Dual Fuel System has been designed to comply with the relevant Australian Standard AS/NZS 1425:2003.

It is recommended to advise your insurance company that your new vehicle operates on both petrol and LPG as failure to do so may invalidate your insurance policy. Your vehicle is required to display the LPG decal on both the front and rear number plates.

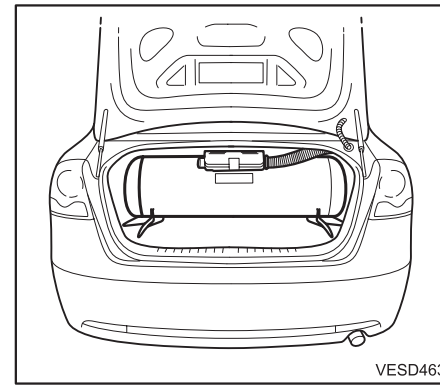
The information contained in this chapter is designed to cover the Holden Dual Fuel System. Information provided was accurate at the time this owner handbook was approved for printing. Holden Ltd., reserves the right, subject to all applicable laws and regulations to change specifications at any time without incurring any liability what so ever.

VEHICLE STORAGE

If the vehicle is to be stored for a prolonged period, turn the manual service valve to the OFF position, located on the LPG cylinder. Refer to *Emergency procedures* previously in this chapter.

USING THE BOOT

Take care when placing heavy or sharp items in the vehicle's boot as these may cause damage to the LPG tank or vent pipes. Contact your Holden Dealer if you notice damage to these items.



NEW ENGINE RUN-IN PROCEDURE

It is recommended that the engine of your vehicle be run in on petrol for 500 km before running the vehicle on LPG.

STARTING THE ENGINE

There are no special requirements for starting your Dual Fuel engine with either fuel selected. Refer to *Engine starting* in chapter 4.

DUAL FUEL LPG (SEDAN ONLY) cont.*

LPG REFUELLING

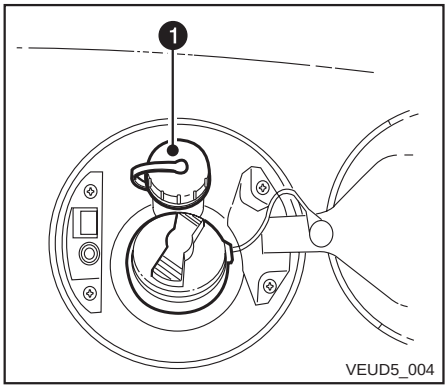
WARNING

- Observe the filling instructions and warnings displayed at the filling station.
- Ensure there are no flames or sparks in the vicinity of the vehicle.

Note LPG or petrol may be added, regardless of the fuel selected.

1. Switch off the engine.
2. Remove the LPG filler cap ❶ by turning anticlockwise.
3. Connect the LPG filler nozzle and fully squeeze and hold the trigger.
4. Release the trigger when the bowser automatically shuts off.

   Note The AFL (Automatic Fill Limiter) shuts off the LPG flow when your vehicle's LPG cylinder is 80% full: this is to allow for liquid expansion.



WARNING

Do not continue trying to add more LPG once the bowser automatically shuts off.

5. Disconnect the LPG filler nozzle.
6. Screw the LPG filler cap back on.

Tank capacity

Refer to *Specifications* in chapter 8.

DUAL FUEL LPG* (SEDAN ONLY) cont.

FUEL SELECTION

Changing fuels and starting

The fuel selector switch is located below the heater controls on the dashboard. Fuel selection may be done at any time by simply changing the switch to the desired fuel.

Note If the vehicle has the default LPG option refer to *Default LPG operation* further on in this chapter.

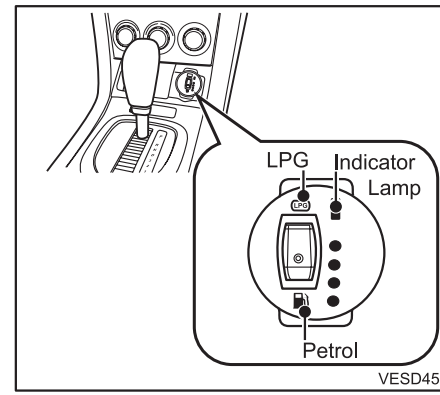
Fuel selector switch

The switch has two positions and a fuel operation indicator lamp, which will change colour to indicate which fuel mode the vehicle is currently running on. The lamp colours are as follows:

Red Petrol operation.

Amber Transition state, currently transferring between fuels.

Green LPG operation.



PETROL OPERATION

When the switch is in the 'Petrol' position, the engine will operate on unleaded petrol. The engine will start on petrol, and if switched from LPG, will automatically make the transition to petrol operation.

LPG OPERATION

When the switch is in the 'LPG' position, the engine will operate on LPG fuel. The engine will start and run on petrol until required conditions are reached, at which time the system will automatically transfer to LPG operation.

Note

- The system will not change from petrol to LPG at idle. Once the engine has reached operating temperature, the engine speed is above 1200 RPM and the switch is in the LPG position, the system will automatically transfer to LPG operation. (If these parameters are not met a beeping noise will sound).
- When switching from petrol to LPG, there is a time delay (approx. 5 seconds) to allow the LPG system to prime.
- When operating on LPG the system will automatically change back to petrol after sensing high load conditions for an extended period. The system will return back to LPG automatically when ready.
- When the system is out of LPG it will automatically change back to petrol operation. To stop the system beeping, change the fuel selection switch to petrol or refill the LPG tank.
- Holden recommends the petrol tank of your vehicle should always have at least a ¼ of a tank of petrol.

DUAL FUEL LPG* (SEDAN ONLY) cont.

DEFAULT LPG OPERATION

The default LPG option is available to customers as an option when purchasing the LPG system and cannot be disabled. This option encourages driving on LPG.

Switching between fuels

The default LPG fuel selector switch is spring loaded to the LPG position.

To select petrol operation:

1. Press and hold the switch in the petrol position for more than one second.
2. The indicator lamp will illuminate red.

Note

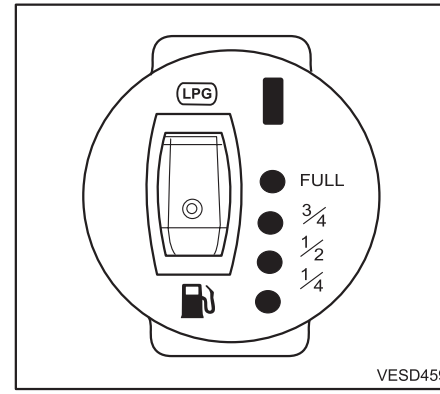
- When manually switched to petrol, the fuel selector switch will emit a repeating cycle of five short beeps. Manually switching to LPG will deactivate the beep cycle.
- If the vehicle is switched off while in the petrol mode the system will automatically set the system to LPG mode when the vehicle is next started.
- When the system is out of LPG it will automatically change back to petrol operation. To stop the system beeping, refill the LPG tank.

To select LPG operation:

1. Press and hold the switch in the LPG position for more than one second.
2. The indicator lamp will illuminate green.

DUAL FUEL LPG* (SEDAN ONLY) cont.

LPG FUEL GAUGE



The 4 lights in the change over switch indicate fuel level:

- Four lights illuminated — full
- Three lights illuminated — ¾
- Two lights illuminated — ½
- One light illuminated — ¼
- One light flashing — LPG reserve
- One light flashing and beeper sounding — out of LPG

Note

- If all 4 fill level lights are flashing, the LPG tank has been over filled. The lights will stop flashing once normal tank level is reached.
- When the system is out of LPG it will automatically change back to petrol operation. To stop the system beeping, change the fuel selection switch to petrol.
- For vehicles fitted with the default LPG feature, the system will continue to beep until the vehicle is refuelled with LPG.
- Check the manual service valve located on the LPG tank to ensure this is not closed. Refer to *Manual service valve* previously in this chapter.
- A few quick beeps indicates the system has automatically changed back to petrol after sensing high load conditions for an extended period. The system will return back to LPG automatically when ready.

WARNING

- Operating the vehicle with no petrol in the fuel tank may cause the vehicle to stall unrecoverably under high RPM/load conditions and possibly cause damage to the petrol fuel pump.
- If the vehicle runs out of petrol it will not start, eliminating the ability to change over to LPG operation.

EMISSION CONTROL

The vehicle is fitted with emission control systems, which are designed to reduce the amount of hydrocarbons (HC), carbon monoxide (CO), and oxides of nitrogen (NOx) that are emitted from the engine and fuel system into the atmosphere. Hydrocarbons and oxides of nitrogen, when exposed to sunlight under certain conditions, contribute to photochemical smog. In addition, carbon monoxide is toxic when it becomes highly concentrated in the air.

The three major emission control systems that may be fitted to the vehicle are:

1. **Evaporative emission control system**

   This system is designed to prevent the escape of fuel vapour from the fuel system and recycle the vapours through the normal combustion process.

2. **Crankcase emission control system**

   This system is designed to prevent blow-by gases from escaping into the atmosphere and recycle them through the combustion process.

3. **Exhaust emission control system**

   The various components of this system operate collectively to limit HC, CO and NOx emissions in the exhaust gas. The exhaust emission control system is comprised of components including electronic control of spark, fuel and idle speed. In addition vehicles have a catalytic converter and closed loop mixture control system.

   Note For service and repair to the vehicles fuel or emission systems contact your Holden Dealer.

OWNER RESPONSIBILITY

The engine, engine control system and exhaust system of the vehicle must NOT be modified in any way. Any change to the design may increase the emissions or otherwise defeat the intent of the regulations.

WARNING

Any person who removes, modifies or hinders any part of the emission control system may be contravening Australian Design Rules. It is also illegal to drive a vehicle modified in this way.

MAINTENANCE REQUIREMENTS

To ensure continuing compliance with the regulations, you must have the vehicle serviced at the frequency shown in the *Maintenance schedule*, in the Service/warranty booklet. Your Holden Dealer will maintain the vehicle's emission control system as per the vehicle's service manual.

It is recommended that the necessary servicing be performed by an authorised Holden Dealer who has the specialised servicing equipment and trained personnel available to ensure that the adjustments and services specified are carried out.

REDUCING FUEL CONSUMPTION

ENGINE

To keep the engine in peak mechanical condition, have it serviced regularly in accordance with the maintenance schedule. Refer to *Maintenance schedule* in the Service/warranty booklet. This ensures items such as the spark plugs, air cleaner and engine idle speed are maintained for minimum fuel usage and peak engine performance.

TRANSMISSION (MANUAL)

For vehicles fitted with a 3.6L (SIDI) direct injection V6 engine; when on level roads, in an unladen condition, it is permissible to drive off in 2nd gear, in the interest of fuel economy.

TYRE PRESSURE

Keep the tyres at the recommended pressures. Under-inflated tyres create extra rolling resistance which contributes to increased fuel consumption. Refer to *Tyres* in chapter 7.

Incorrect tyre pressures can also cause uneven and premature tyre wear.

WHEEL ALIGNMENT

Maintain correct front and rear wheel alignment. Incorrect alignment makes the wheels drag, which increases fuel consumption and causes uneven and premature tyre wear.

WARM UPS AND IDLING

Avoid long engine warm ups. They are unnecessary and waste fuel. An engine takes approximately 5 minutes to reach its efficient operating temperature and it does this most effectively when driving.

Avoid long engine idling. If you have to wait for more than a couple of minutes, switch off the engine to conserve fuel.

ACCELERATING, DRIVING AND BRAKING

Accelerate gently and avoid rapid starts. Sudden bursts of speed, full throttle acceleration and hard braking waste fuel.

Drive the vehicle at steady speeds where possible (after running-in).

Manual transmission: It is desirable to reach top gear as soon as possible, but under no circumstances should you force the engine to labour in top gear.

RIDING THE BRAKE

Do not rest your foot on the brake pedal when you do not intend to brake, as this can overheat the brakes, increase brake pad wear, damage the brakes and waste fuel.

AIR CONDITIONING

Switch off the air conditioning when not required. However, once every 2 weeks, with the engine running, switch the air conditioning on for 5 to 10 minutes to lubricate seals (even in winter).

CHAPTER 6

Emergencies

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*The asterisk signifies equipment options not in all vehicles, model variants, engine options, optional equipment and Genuine Holden Accessories (and Parts).

CUSTOMER ASSISTANCE

We want you to be happy with your new vehicle, together with the people you deal with while you have the vehicle.

Normally, any problems with the sales, operation, servicing, parts/accessories or the validity of original equipment supplied with your vehicle will be handled by your Holden Dealer's Sales and Service Department.

We realise however that, with the best intentions, misunderstandings sometimes occur.



Therefore, we suggest you discuss any concern with one of the Holden Dealer's management people. If you have not received satisfaction from the Sales Manager or Service Manager – go to the General Manager or to the Dealer Principal.

By now you should have satisfaction. If not, the Holden Customer Assistance office is at your disposal.



The Holden Customer Assistance representatives can be telephoned from anywhere within Australia for only the cost of a local call. The contact number is:

1800 033 349

Naturally, telephoning is the quickest and the best way to contact. However, if you prefer to write the address is:

The Manager
Holden Customer Assistance Centre
GPO Box 1714



Melbourne 3001

Your letter should clearly outline your concern or query, and include the following:



- Your name and address.
- Telephone numbers, both private and business.
- Servicing dealer's name and address.
- Vehicle model.
- Vehicle identification number (I.S.O.V.I.N.), refer to the inside front cover of the service booklet in your vehicle's glovebox.
- Date of purchase.
- Current odometer reading.

Most of this information will be found on the Vehicle Identification Certificate, located inside the front cover of the service booklet in your vehicle's glovebox.

Before you write however, remember that the telephone is the quicker and more efficient means of communication.

FOR NEW ZEALAND HOLDEN OWNERS

The information in this Owner's Handbook applies primarily to Australian Holden vehicles and there may be some differences to the Warranty and Owner Assistance provisions for New Zealand. Applicable details for New Zealand are set out in the Holden Warranty and Owner Assistance Information booklet enclosed in the New Zealand glovebox wallet.



New Zealand Assistance can be reached on:

0800 HOLDEN (0800 465 336)

This number provides access to New Zealand Roadside Assistance as well as New Zealand Customer Assistance.

If you prefer to write the address is:

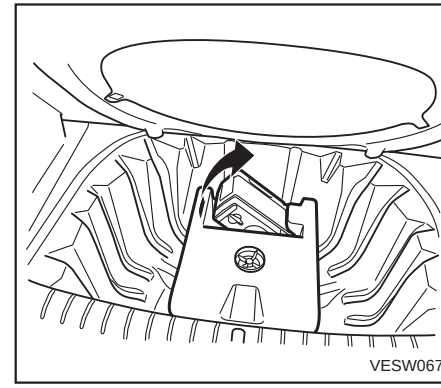


The Manager
Holden Customer Assistance Centre
GPO Box 1714
Melbourne
Australia 3001

TYRE SEALANT AND AIR COMPRESSOR KIT ✻

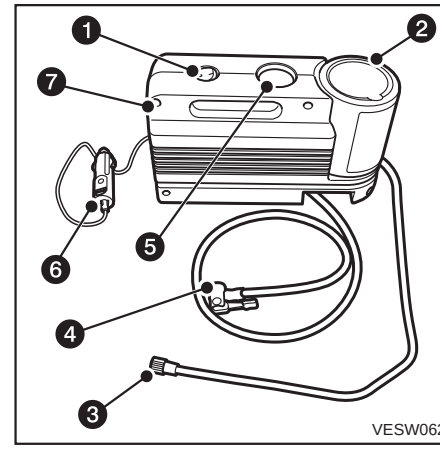
This vehicle may be equipped with an emergency tyre sealant and air compressor kit in place of the jack, tools and spare tyre. It is located in a foam container in the boot/cargo area. The tyre sealant and air compressor kit can be used to temporarily repair a punctured tyre by sealing small holes in the tread of the tyre. It can also be used to inflate an underinflated tyre. The vehicle must be driven for 8 km after the tyre is sealed and inflated to the recommended pressure, to ensure the sealant is distributed evenly. Refer to *Temporary puncture repair* further on in this chapter.

The kit is located in the compartment in the floor of the boot/cargo area.


VESW067

The kit includes:

❶ On/Off switch.
❷ Tyre sealant canister.
❸ Sealant-air delivery hose.
❹ Air-only delivery hose.
❺ Pressure gauge.
❻ 12 volt power connection.
❼ Air compressor.



VESW062

TYRE SEALANT AND AIR COMPRESSOR KIT cont.

Tyre sealant

The sealant can temporarily seal a small puncture up to 6 mm in the tread area of the tyre. The sealant cannot seal sidewall damage, large punctures, or a tyre that has unseated from the wheel. Read and follow the safe handling instructions on the label adhered to the tyre sealant canister. Check the expiry date on the tyre sealant canister before use. The tyre sealant canister must be replaced before its expiry date. There is only enough sealant to seal one tyre. After usage, the tyre sealant canister and sealant-air delivery hose must be replaced as an assembly. Replacement tyre sealant canisters are available from your Holden Dealer. Refer to *Replacing the tyre sealant canister* further on in this chapter.

Temporary puncture repair

Follow the directions closely for correct sealant usage.

1. All passengers must exit the vehicle.
2. Inspect the damaged tyre.

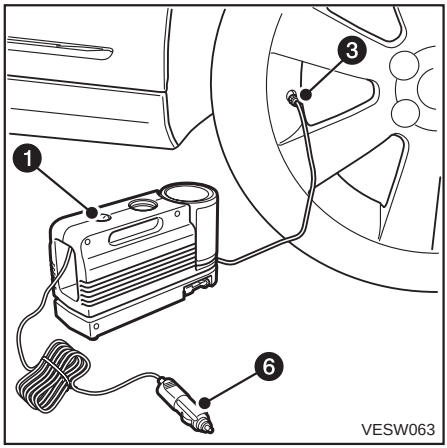
Note

- The sealant cannot seal sidewall damage, large punctures, or a tyre that has unseated from the wheel.
- Do not remove any objects that have penetrated the tyre.

3. Place the tyre sealant and air compressor kit on the ground. Unwrap the sealant-air delivery hose ❸ from the side of the compressor.
4. Remove the 12 volt power connection ❻ from the kit.

   Note Do not connect to the power socket yet.
5. Unscrew the tyre valve cap anticlockwise and remove.
6. Attach the sealant-air delivery hose ❸ onto the tyre valve. Turn it clockwise until tight.
7. Switch the On/Off switch ❶ to the **O** Off position.
8. Plug the 12 volt power connection into the vehicles power socket. Refer to *Power socket* in chapter 3.

   Note Do not jam the 12 volt power connection cable in the door, boot/tailgate or window.
9. Start the engine and allow it to idle. The engine must be running to ensure the battery does not run down while the compressor is in use.



WARNING

Do not run the engine in an enclosed area or with passengers in the vehicle. Refer to *Fuel* in chapter 5 for exhaust gas warnings.

TYRE SEALANT AND AIR COMPRESSOR KIT cont.*

10. Switch the ON/Off switch ❶ to the **I** On position. The kit will begin to inject sealant and air into the tyre. Sealant may leak from the puncture hole until the vehicle is driven and the hole has sealed.
11. Check the air pressure gauge ❺. If there is no pressure reading while the compressor is running, check for leaks at the connection between the tyre valve and the sealant-air delivery hose ❸.
12. Inflate the tyre to the recommended inflation pressure, found on the tyre placard. Refer to *Exterior checks* in chapter 7 for tyre placard location.

    Note The pressure gauge ❺ will initially read high while the compressor injects the sealant into the tyre. Once the sealant injection is complete, the pressure will quickly drop. It will start to rise again as the tyre inflates with air.

    WARNING

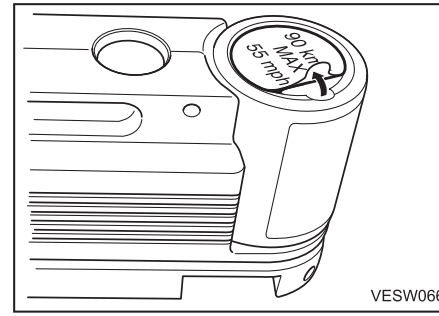
    Do not over inflate tyres due to risk of injury or damage to the tyre. Refer to the tyre placard for recommended inflation pressure.
13. Switch the On/Off switch ❶ to the **O** Off position.

    Note The pressure gauge ❺ reads slightly high while the compressor is on. Switch the compressor off to get an accurate reading. The compressor may be switched on and off until the correct pressure is reached.

    WARNING

    If the recommended pressure cannot be reached after approximately 15 minutes, the vehicle should not be driven. The tyre is too severely damaged and the tyre sealant and air compressor kit cannot inflate the tyre. Disconnect and stow the tyre sealant and air compressor kit back in its original position. Contact your Holden Dealer.

    Note The tyre is not sealed and will continue to leak air until the vehicle is driven and the sealant is distributed in the tyre. Steps 12 through 19 must be done immediately following step 11. Be careful while handling the tyre sealant and air compressor kit as they could be hot after usage.
14. Unplug the 12 volt power connection ❻ from the power socket in the vehicle.
15. Turn the sealant-air delivery hose ❸ anticlockwise and remove.
16. Replace the tyre valve cap.
17. Stow the sealant-air delivery hose ❸ and 12 volt power connection ❻ in their original locations within the tyre sealant and air compressor kit.
18. If the flat tyre was able to be inflated to the recommended inflation pressure, remove the maximum speed label from the tyre sealant canister and place it in a highly visible location. The maximum speed label reminds you to drive cautiously and not to exceed 90 km/h until you have the damaged tyre replaced or repaired.



VESW066

TYRE SEALANT AND AIR COMPRESSOR KIT cont.*

19. Stow the tyre sealant and air compressor kit back in its original position.

    WARNING

    Always stow the tyre sealant and air compressor kit in its original position. Unsecured loads increase the risk of injury during heavy braking, sudden avoidance manoeuvres or a collision.

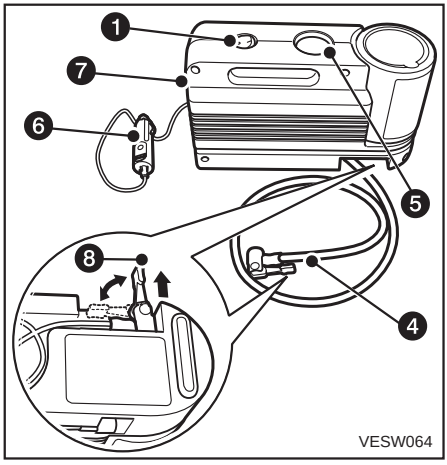
20. Drive the vehicle immediately for at least 8 km to distribute the sealant evenly in the tyre.
21. Stop at a safe location and check the tyre pressure. Refer to steps 1 through 11 under *Inflating tyres without sealant* further on in this chapter.
    - If the tyre pressure has fallen more then 10 psi (68 kPa), below the recommended inflation pressure, stop driving the vehicle. The tyre is too severely damaged and the tyre sealant and air compressor kit cannot seal the tyre. Contact your Holden Dealer.
    - If the tyre pressure has not dropped more than 10 psi (68 kPa) from the recommended inflation pressure, inflate the tyre back up to the recommended inflation pressure.
22. Wipe off any sealant from the wheel, tyre or vehicle.
23. Dispose of the used tyre sealant canister at your Holden Dealer or in accordance with local and State codes and practices. Replace it with a new canister available from your Holden Dealer. Refer to *Replacing the tyre sealant canister* further on in this chapter.

    Note This is a temporary puncture repair. Take the vehicle to your Holden Dealer to have the tyre repaired or replaced as soon as possible.

Inflating tyres without sealant

To use the air compressor to inflate a tyre with air only and not sealant:

❶ On/Off switch.
❹ Air-only delivery hose.
❺ Pressure gauge.
❻ 12 volt power connection.
❼ Air compressor.
❽ Lever.



TYRE SEALANT AND AIR COMPRESSOR KIT * *cont.*

1. Lift the lever ❽ and pull the air-only delivery hose ❹ from the bottom of the kit.
2. Remove the tyre valve cap by turning it anticlockwise.
3. Push the air-only delivery hose ❹ onto the tyre valve and push the lever ❽ down to secure in place.
4. Plug the 12 volt power connection ❻ into the vehicles power socket. Refer to *Power socket* in chapter 3.

   Note Do not jam the 12 volt power connection cable in the door, boot/tailgate or window.
5. Start the engine and allow it idle. The engine must be running to ensure the battery does not run down while the compressor is in use.

WARNING

Do not run the engine in an enclosed area or with passengers in the vehicle. Refer to *Fuel* in chapter 5 for exhaust gas warnings.

6. Switch the ON/Off switch ❶ to the **I** On position. The kit will begin to inflate the tyre.

   WARNING

   Do not over inflate tyres due to risk of injury or damage to the tyre. Refer to the tyre placard for recommended inflation pressure.
7. Check the pressure gauge ❺. If there is no pressure reading while the compressor is running, check for leaks at the connection between the hose and the tyre valve.
8. Inflate the tyre up to the recommended inflation pressure using the air pressure gauge ❺. Refer to *Exterior checks* in chapter 7 for tyre placard location.

   Note The pressure gauge ❺ reads slightly high while the compressor is on. Switch the compressor off to get an accurate reading. The compressor may be switched on and off until the correct pressure is reached.
9. Switch the ON/Off switch ❶ to the **O** Off position.

   Note Be careful while handling the tyre sealant and air compressor kit as they could be hot after usage.
10. Disconnect the 12 volt power connection ❻ and the air-only delivery hose ❹ and stow in their original locations within the tyre sealant and air compressor kit.
11. Replace the tyre valve cap by turning it clockwise.
12. Stow the tyre sealant and air compressor kit back in its original position.

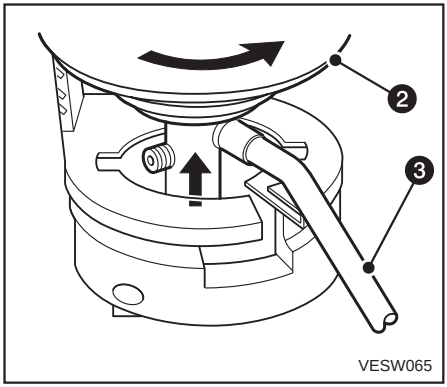
    WARNING

    Always stow the tyre sealant and air compressor kit in its original position. Unsecured loads increase the risk of injury during heavy braking, sudden avoidance manoeuvres or a collision.

*TYRE SEALANT AND AIR COMPRESSOR KIT * cont.*

Replacing the tyre sealant canister

After a temporary puncture repair has been carried out, the tyre sealant canister must be replaced to keep the kit in a state of readiness.



To remove the canister:

1. Unlock the air-only delivery hose ❹ from the tyre sealant canister by pulling up on the lever ❽ .
2. Pull the air-only delivery hose ❹ from the tyre sealant canister.
3. Unwrap the sealant-air delivery hose ❸ from the air compressor ❼.
4. Turn the tyre sealant canister ❷ anticlockwise so the sealant-air delivery hose ❸ is aligned with the slot in the compressor.
5. Lift the tyre sealant canister ❷ from the compressor and replace with a new tyre sealant canister.

   Dispose of the tyre sealant canister at your Holden Dealer or in accordance with local or State codes and practices. Replace it with a new canister, available from your Holden Dealer.

To install a new tyre sealant canister:

1. Align the sealant-air delivery hose ❸ with the slot in the compressor.
2. Push the tyre sealant canister ❷ down and turn it clockwise.
3. Wrap the sealant-air delivery hose ❸ around the compressor channel to stow it in its original location.
4. Push the air-only delivery hose ❹ onto the tyre sealant canister ❷ inlet and push the lever ❽ down.

FLAT TYRE

WARNING

- All passengers must be out of the vehicle when it is being jacked.
- Do not jack a vehicle with a trailer attached. Remove the trailer first.
- Only jack the vehicle on hard, level surfaces.
- Ensure moving parts of the jack are adequately lubricated before use.
- Use the jack only at the designated lifting points. Use in other locations may result in the vehicle falling off the jack, or damage to the vehicle.
- If using a jack (or hoist) other than the jack supplied with the vehicle, refer to *Changing a flat tyre* further on in this chapter for the correct lifting positions.
- Do not start or run the engine while the vehicle is supported by the jack.
- Use the jack only for lifting the vehicle when changing wheels.
- Do not get under a vehicle supported only by a jack; use vehicle support stands.
- Vehicles with alloy wheels may have a steel spare wheel*. Drive carefully and do not exceed 80 km/h if the tyre size or tread pattern of the spare tyre is different to the other tyres on the vehicle. Although the spare tyre was fully inflated when the vehicle was new, it can loose air over time. Check the inflation pressure regularly. After installing the spare tyre on the vehicle, stop as soon as possible to check the inflation pressure is correct. Have the flat tyre repaired or replaced and installed back on the vehicle as soon as possible.

*TEMPORARY SPARE WHEEL**

WARNING

The temporary spare wheel is for temporary use only. Drive carefully and once the wheel is fitted to the vehicle do not exceed 100 km/h. Although the spare tyre was fully inflated when the vehicle was new, it can lose air over time. Check the inflation pressure regularly. After installing the spare wheel on the vehicle, stop as soon as possible to check the inflation pressure is correct. The temporary spare tyre is made for distances up to a maximum aggregate of 5,000 km. However, you should have the full size tyre repaired or replaced and installed back on the vehicle as soon as possible.

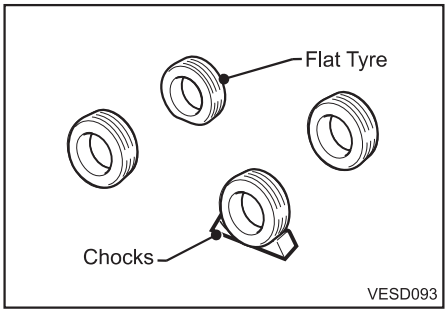
The temporary spare tyre must have a maximum load rating of at least 730 kg, or a load index of 97, and a speed category symbol of at least M.

Temporary spare wheel and tyre specification:

Rim size	Tyre size	Tyre inflation pressure
16 X 7	225/60R16 98V	300 kPa (44 psi)
17 X 7	225/55R17 97V	300 kPa (44 psi)
17 X 4*	T155/80R17 111M	420 kPa (60 psi)

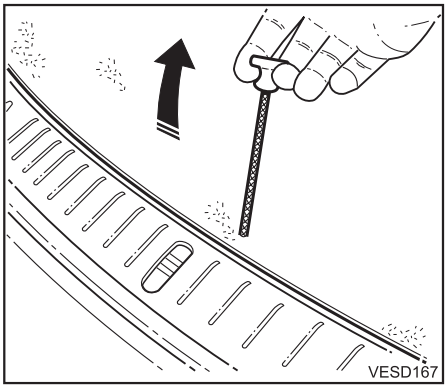
CHANGING A FLAT TYRE

1. Park on a hard, level surface, in a safe location, and set the park brake firmly. Switch the hazard warning flashers on.
2. Remove the ignition key and place manual transmissions* in reverse gear or automatic transmissions* in **P** (park).
3. Chock the wheel diagonally opposite the flat tyre with a suitable solid object.



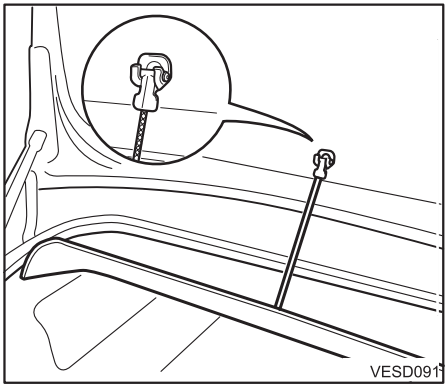
Sedan spare wheel access

4. The spare wheel* is stored in a compartment in the floor of the boot. Open the boot, grip the handle of the spare wheel cover strap and pull it up.



5. The spare wheel cover can be secured out of the way. Attach the T-piece to the boot lid as shown.

   Note Remember to unhook the strap before closing the boot.

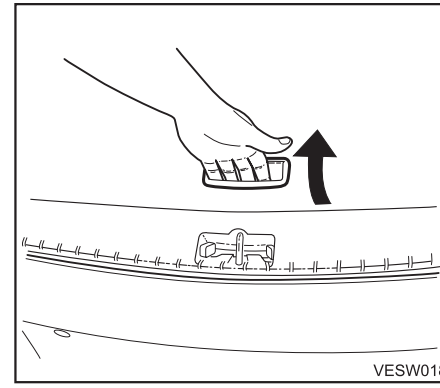


CHANGING A FLAT TYRE cont.

Sportwagon spare wheel access

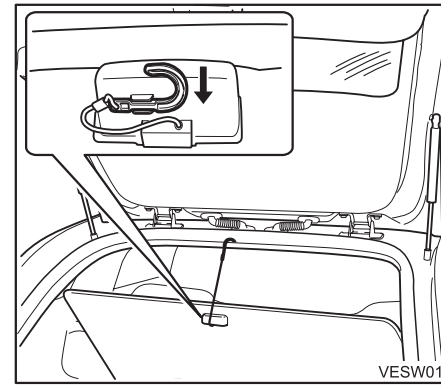
6. The spare wheel* is stored in a compartment in the floor of the cargo area.

   Open the tailgate and use the handle to lift the spare wheel cover up.



7. Detach the hook from the floor cover. Attach the hook to the tailgate opening as illustrated.

   Note Remember to detach the hook before closing the tailgate.

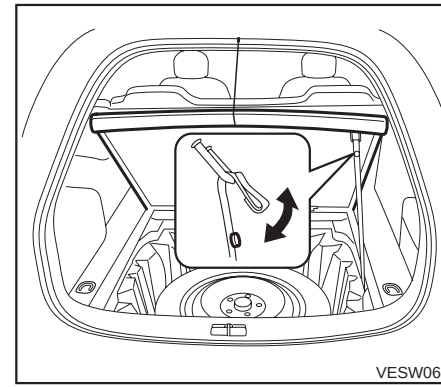


Spare wheel cover removal:

If required the spare wheel cover may be removed as follows:

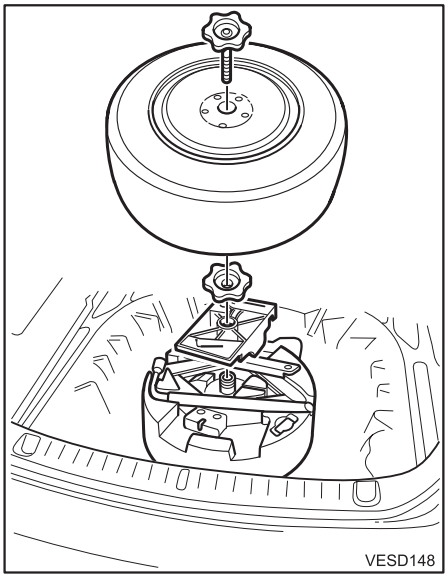
1. Lift the spare wheel cover up and attach the hook to the tailgate opening as shown above.
2. Disconnect securing strap by unclipping the press stud.
3. Support the cover and detach hook from the tailgate opening.
4. Carefully remove the cover.
5. Reverse the procedure to install the cover.

Note Align the two locating tabs at the forward edge of the cover with the holes in the floor when installing.



CHANGING A FLAT TYRE cont.

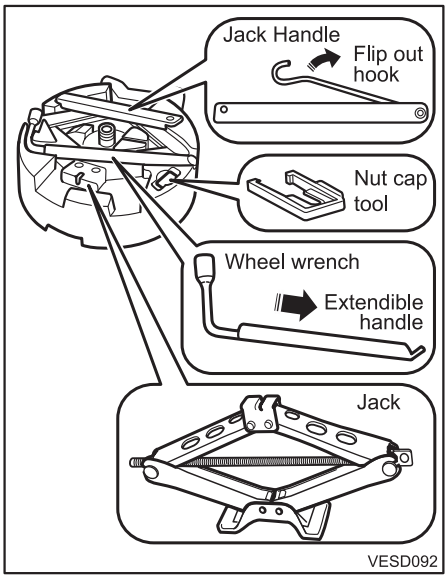
8. Undo the retainer nut by hand and remove the spare wheel*.
9. To access the tools, remove the second retaining nut* and panel*.



10. Remove the tools* (jack handle, wheel wrench, jack and nut cap tool).

    Note The nut cap tool is only required for vehicles with nut caps.
11. Place the tools next to the wheel being changed.

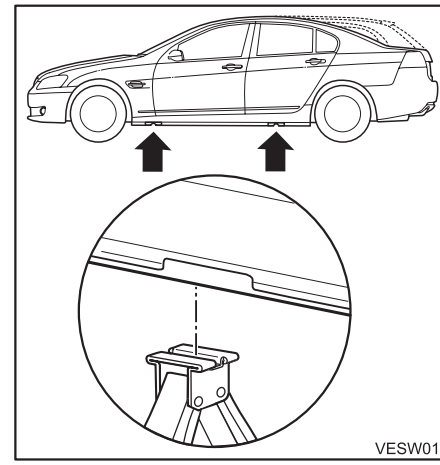
    Note The tool container* can be removed from the vehicle if required.



CHANGING A FLAT TYRE cont.

12. If the wheel trim covers the wheel nuts, remove as follows:
    - If a full wheel cover is fitted, lever it off with the end of the wheel wrench.
    - If a centre cap is fitted that covers the wheel nuts, remove it using the end of the wheel wrench.
    - If the centre cap is secured using the wheel nuts, it will be removed as the wheel nuts are removed in step 22. Remember to refit it in step 24.
    - If individual wheel nut caps are fitted, remove each nut cap individually using the nut cap tool provided. Insert the nut cap tool into the nut cavity, squeeze the tool to grasp the nut cap and pull outwards to remove it. Put the nut caps (together) in a dry, clean place to avoid getting dirt inside the caps.
13. Using the fully extended wheel nut wrench, loosen the wheel nuts in an anti-clockwise direction, one half to a full turn, but do not remove the wheel nuts.

    Note The wheel nut wrench must be extended before use to ensure the correct amount of torque can be applied.
14. Position the jack beneath the jack location closest to the wheel being changed. There are 4 jack locations for use with the emergency jack, identified by cutouts in the underside of the door sill. The jack must not be used in any other positions.
15. Wind the jack up by hand until it engages with the jacking point, ensure that the jack is not tilted and the base is resting squarely on the ground.

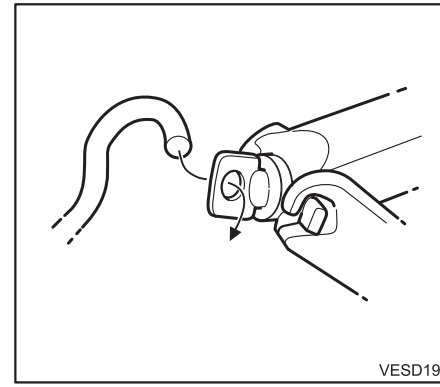

VESW014

WARNING

- Failure to position the jack as described above could cause the vehicle to slip off the jack.
- Do not get under a vehicle supported only by a jack; use vehicle support stands.

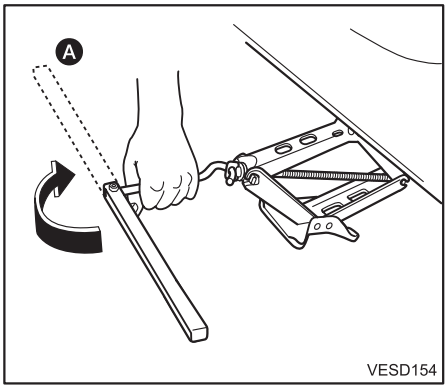
16. Fit the jack handle onto the jack by sliding the hook through the loop on the end of the jack.

    Note The jack handle must be unfolded into a right angle before it is used.


VESD191

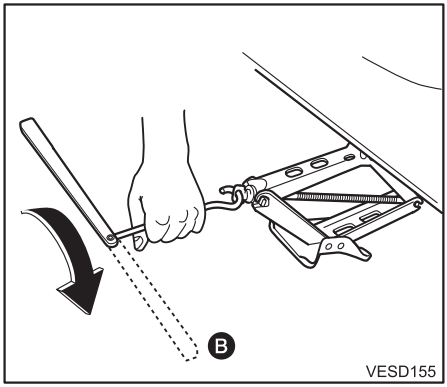
CHANGING A FLAT TYRE cont.

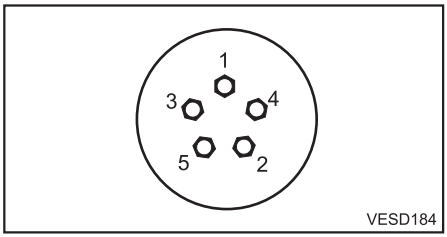
17. To use the jack handle, kneel down beside the vehicle to the side of the jack.
18. Grasp the hooked fold out section with one hand as shown.
19. With the other hand turn the handle through 180 degrees until it reaches position Ⓐ.



20. Turn the handle from position Ⓐ to position Ⓑ (clockwise direction).
21. Repeat steps 19 & 20 until the bottom of the flat tyre is about 5 cm above the ground.

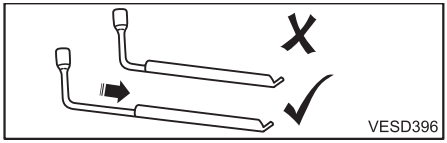
    Note This extra 5 cm is required otherwise the inflated spare wheel will touch the ground when being fitted.
22. Remove the wheel nuts and place (together) in a dry place to avoid getting dirt in the threads.
23. Exchange the wheel on the vehicle with the spare wheel.
24. Replace the wheel nuts and lightly tighten with the wheel nut wrench.
25. Lower the vehicle by reversing the jacking procedure. Remove the jack from under the vehicle.
26. With the wheel on the ground, use the extended wheel nut wrench to fully tighten the wheel nuts in the sequence shown.





WARNING

To fully tighten the wheel nuts, the wrench must be fully extended.



CHANGING A FLAT TYRE cont.

27. Replace any wheel trim or nut cap that was covering the wheel or wheel nuts.
    Note If a full wheel trim is fitted, the tyre valve must line up with the hole in the wheel trim before refitting. Ensure the wheel trim clip-in legs are correctly retained in their groove.
28. Replace the tools into the container and the flat tyre as shown in steps 8 to 10.
29. To avoid movement of the tools in the container and spare wheel, the upper retaining nut, lower retaining nut* and panel* should be tightened firmly by hand.
    Note If the container was removed from the vehicle, it must be placed back in the correct direction as shown in steps 8 to 10.

WARNING

As soon as possible after changing a wheel, have the wheel nuts tightened with a torque wrench to 170 ± 20 Nm (Newton metres). Wheel nuts must be tightened evenly to the correct torque in the sequence shown (refer to step 24), as wheel nuts which have not been tightened properly could eventually allow the wheel to come off while the vehicle is moving.

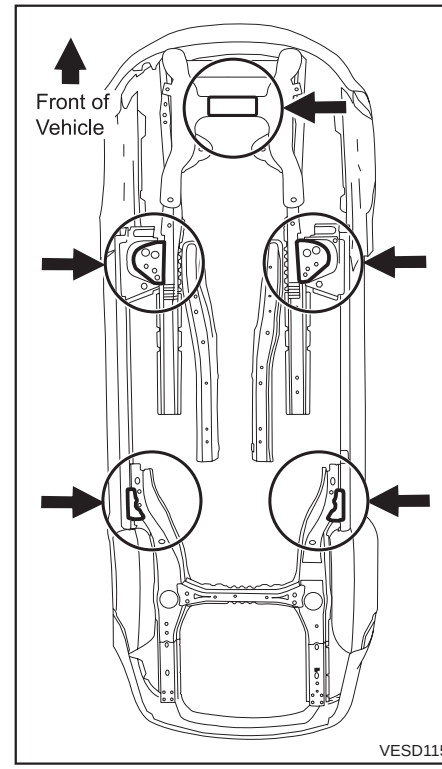
TROLLEY JACK OR VEHICLE HOIST

If using a trolley jack or vehicle hoist to raise the vehicle, it is important that the jack be positioned under the centre of the suspension cross member or hoist pad locations, as shown in the illustration.

WARNING

- Do not jack under the suspension control arms.
- Always support the vehicle with jack stands in the specified location when raised.

Note Always use the jack locations shown in step 14 of the previous section when using the original jack supplied with the vehicle. This jack has been designed to correctly and safely lift the vehicle, provided the warnings are observed.



TOWING A DISABLED VEHICLE

WARNING

- Flat tray towing is the only recommended towing procedure.
- A slot and rope location is provided to move a bogged or disabled vehicle a short distance or to pull the vehicle onto a flat tray tow truck.
- Use only wheel lashings to secure the vehicle to the flat tray tow truck.
- Do not attach towing equipment to the bumpers or brackets, suspension or cross members.
- To prevent damage, use only proper towing equipment.

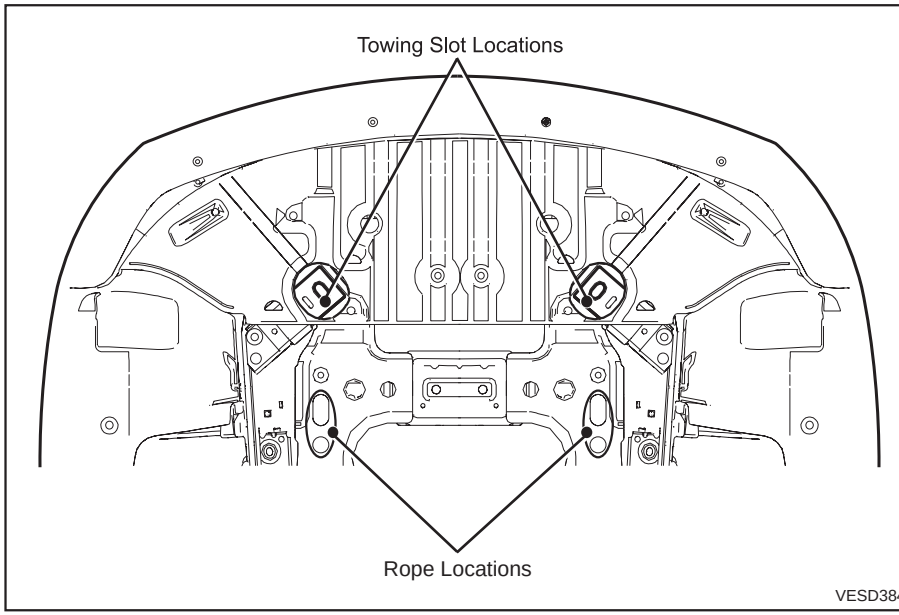
MOVEMENT OF DISABLED VEHICLES

An oval shaped slot is provided underneath the front of the vehicle.

Access to the slot is via the circular hole in the black plastic splash shield underneath the front of the vehicle.

Note

- A hook of the appropriate size, attached to the cable, should be used in the slot. A rope cannot be threaded through the slot.
- Alternatively, a rope can be looped through the holes at the rope location. Refer to the illustration below.



ENGINE OVERHEATING

WARNING

Immediate action is required if the engine overheats. This is indicated by one or more of the following:

- The temperature gauge needle moving over to the **H**.
- The animated warning **Engine Temp Hot** appearing on the central display. Refer to *Warning/reminder indications* in chapter 1A.
- Steam escaping from under the bonnet.
- A loss of power.
- A loud knocking or pinging noise.

Continued driving EVEN FOR A SHORT TIME could cause engine damage. Stop the vehicle as soon as it is safe to do so and perform the following checks.

Leave the engine idling, ensure that the park brake is applied and that manual transmissions* are placed in neutral and automatic transmissions* are placed in **P** (park). Exit the vehicle and audibly check that the cooling fan is working.

WARNING

- Do not open the bonnet if you can see or hear steam or coolant escaping from the engine compartment. Scalding fluid and steam can be blown out under pressure which could cause serious burns. Wait until no steam or coolant can be seen or heard before opening the bonnet.
- Do not remove the radiator cap if the engine and radiator are still hot. Scalding fluid and steam can be blown out under pressure which could cause serious burns.
- Do not place hands near under bonnet components as the cooling fan may start working unexpectedly even when the engine is not running and the ignition is switched off.

If the fan is working and the temperature gauge needle has not returned to its normal position within a few minutes, STOP the engine and remove the ignition key. Look for leaks at the radiator hoses and connections, heater hoses and connections, radiator and water pump. Take care when checking these areas as they will probably still be hot. If you find a major leak or other problems that may have caused the engine to overheat, do not run the engine until these problems have been corrected.

Check the air intake area in the front bumper to ensure that it is clear of leaves and road grime. Refer to *Exterior checks* in chapter 7.

If you do not find anything wrong, you should check the engine coolant level at the coolant reservoir. Refer to *Under bonnet checks* in chapter 7.

ENGINE OVERHEATING cont.

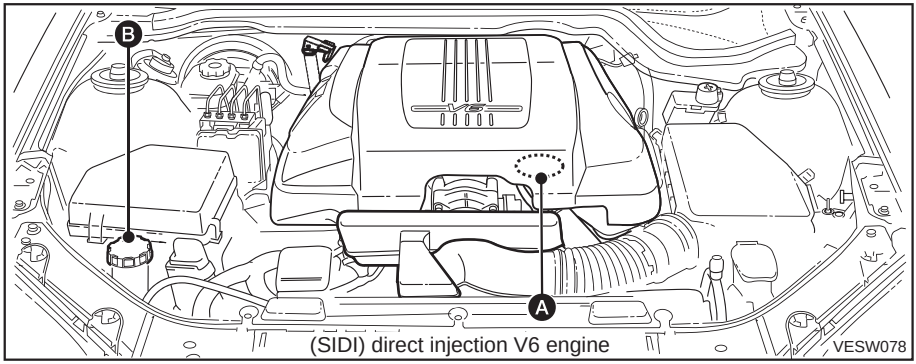
LOW COOLANT LEVEL

If the level is too low, proceed as follows:

WARNING

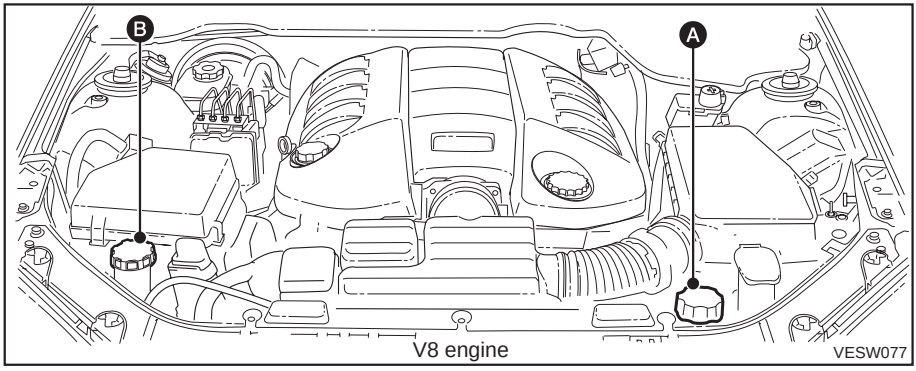
Do not remove the radiator cap if the engine and radiator are still hot. Scalding fluid and steam can be blown out under pressure which could cause serious burns.

When the engine has cooled sufficiently, check the coolant reservoir level and radiator level and fill as follows.



(SIDI) direct injection V6 engine

Note For all V6 engine variants, the coolant reservoir locations are in similar positions within the engine compartment.



V8 engine

1. Check the coolant reservoir level Ⓑ and if required, top up with coolant of the correct concentration. Refer to *Under bonnet checks* in chapter 7.

WARNING

- Do not remove the radiator cap if the engine and radiator are still hot. Scalding fluid and steam can be blown out under pressure which could cause serious burns.
- Remove the engine cover if required. Refer to *Engine cover removal* in chapter 7.

2. Locate the radiator cap Ⓐ housed on the engine (V6 engines) or at the front of the engine bay (V8 engines).
3. Cover the cap with a thick cloth and turn it slowly anticlockwise until it can be removed.

ENGINE OVERHEATING cont.

WARNING

Do not spill coolant on the vehicle's exterior surfaces as it can damage the paintwork. If you do, wash it off immediately.

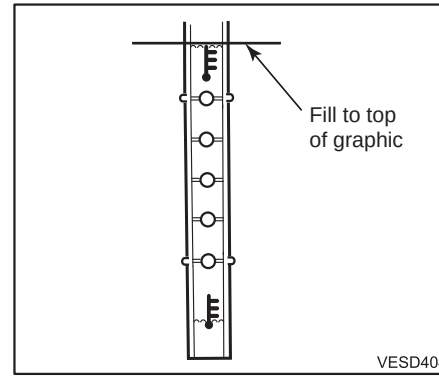
4. If there is no coolant or the coolant level is low, slowly fill the system through the radiator cap opening with coolant of the correct concentration (Refer to *Specifications* in chapter 8) until full. Wait 30 seconds for coolant to settle and top up if the level drops.

   Note

   - Take care not to spill coolant on the accessory drive belts.
   - If a spill occurs, rinse the belts immediately with fresh water.
5. Start the engine.
6. With the engine idling, top up the coolant through the radiator cap opening until full. Wait 30 seconds for the coolant to settle and top up if the level drops.
7. When the system is full of coolant, fit the radiator cap.
8. Switch off the ignition (LOCK position).
9. Check the coolant level in the reservoir and fill it until the level is at the top of the graphic on the dipstick as shown.

   Note

   - Over filling the reservoir is only required when the coolant level in the radiator is low, to allow for any air that may have been trapped, to escape.
   - The coolant reservoir will require the level to be checked for the next two days. Refer to *Under bonnet checks* in chapter 7.
   - If the coolant is low, this may indicate that a problem exists. Contact your Holden Dealer as soon as possible.



Note The engine may temporarily operate at high temperatures during demanding operating conditions, especially on hot days, including:

- climbing a long hill,
- stopping immediately after high speed driving,
- idling for long periods in traffic,
- towing a heavily laden trailer or caravan.

Avoid driving for prolonged periods in any of the above conditions if the temperature gauge shows **H**. It may help to switch off the air conditioning in these conditions.

FLAT BATTERY

JUMP STARTING

Please read the following warnings and procedure in full before attempting to jump start the vehicle.

If, after reading the following procedure, you are still unsure about 'jump starting', Holden strongly recommends for your safety and that of the vehicle that you seek the assistance of a suitably trained service technician.

Note If the vehicle's battery is disconnected or discharged, the tailgate (Sportwagon) will not open normally. Refer to *Sportwagon tailgate lock* in chapter 2.

WARNING

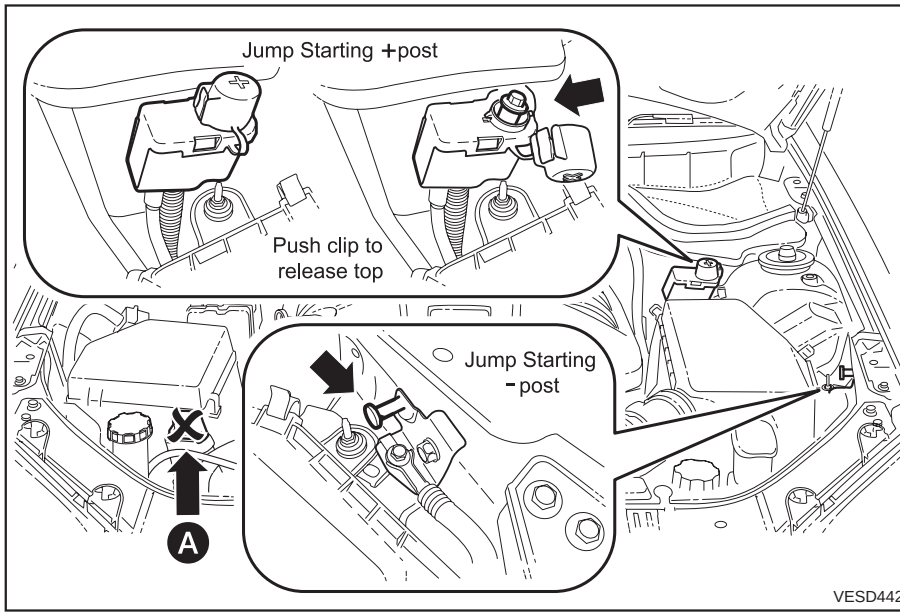
Do not push start or tow start either a manual or an automatic vehicle. If unburnt fuel were to reach the catalytic converter and ignite, the converter could overheat or be destroyed by backfire. Therefore, if the battery is flat, jump start, but do not push start the vehicle.

Batteries produce explosive gases, contain corrosive acids and supply levels of electrical current high enough to cause burns. Therefore, adhere to the following when working near a battery:

- Do not attempt jump starting directly from the battery in the boot (Sedan) or cargo area (Sportwagon).
- Do not let the jumper lead clamps touch each other or other metal parts.
- Do not allow the jumper leads to contact any rotating engine components.
- Do not use open flames or sparks near the battery.
- Do not smoke near the battery.
- Never use a quick charger to start the engine.
- The battery must be removed from the vehicle for recharging.
- When refitting the battery make sure the vent tube is correctly installed.
- Only use the recommended battery otherwise the electric power management system may not work correctly. Refer to your Holden Dealer for battery replacement.
- Wear eye protection such as safety glasses and avoid leaning over the battery.
- Battery acid is corrosive. If it gets on your skin, wash with plenty of water immediately. If it gets in your eyes you should not only flush with lots of water, but should also seek medical help. Battery acid also damages paint and fabrics. To minimise damage, wash it off immediately.
- Remove rings, metal watch bands and other metal jewellery before working around the battery.
- If a permanently connected hands free telephone kit is fitted to the vehicle, remove the fuse for the telephone kit before jump starting. Remember to replace the fuse afterwards.

FLAT BATTERY cont.

Jump starting connection posts



- The jump start positive and negative posts are located in the engine bay on the left-hand side of the vehicle.
- These posts are used instead of a direct connection to a battery.
- The positive jump start connection is covered by a red cap. Remove to expose the terminal.

WARNING

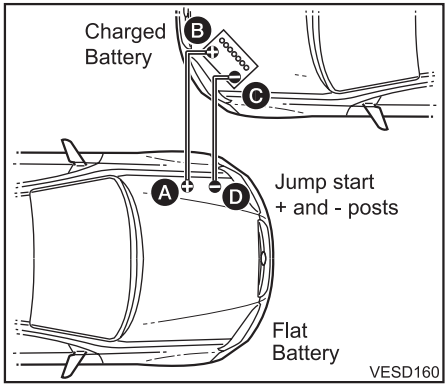
Do not make any connections at point Ⓐ as costly damage to the vehicle could result.

FLAT BATTERY cont.

Jump starting procedure

Note The battery in both vehicles must have a negative earth and a 12 volt rating.

1. Position the two vehicles so that they are NOT touching.
2. Apply the park brakes.
3. Put automatic transmissions* in **P** (park) and manual transmissions* in neutral.
4. Switch the ignition to LOCK and turn off all lights and accessories in both vehicles, except the hazard warning flashers or any lights needed for the work area.
5. Attach one end of the RED jumper lead to the jump start positive post Ⓐ.
6. Attach the other end of the RED jumper lead to the positive terminal Ⓑ of the charged battery.
7. Attach one end of the BLACK jumper lead to the negative terminal Ⓒ of the charged battery.
8. Attach the other end of the BLACK jumper lead to the jump start negative post Ⓓ.
9. Start the engine in the vehicle with the charged battery and run the engine at idle speed for at least 4 minutes.
10. Start the engine of the vehicle with the flat battery.



11. Turn off the headlamps, rear demister, air conditioning and audio system of the vehicle with the flat battery.
12. Allow both cars to run for at least 4 minutes still connected, to stabilise battery voltage.
13. Leave the engines running while removing the BLACK negative jumper lead first, followed by the RED positive jumper lead.

    Note

    - Ensure that the red protective cap is refitted to the positive jump start post following removal of the jump leads.
    - While removing each clamp, take care that it does not touch any other metal while the other end remains attached.

FUSE REPLACEMENT

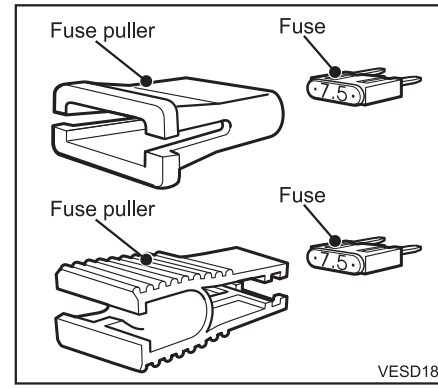
WARNING

Switch off the ignition (LOCK position) and any electrical equipment before changing a fuse.

A fuse puller is provided in the cabin and engine compartment fuse panels, which can be used on each of the 3 fuse panels.

Spare fuses of various ratings are provided in the cabin and engine compartment fuse/relay boxes.

Always replace a blown fuse with one of the same amperage. The amperage is shown on the fuse's head:



Colour	Rating (amps)
Grey	2
Brown	7.5
Red	10
Blue	15
Yellow	20
Natural	25
Green	30

Note If a fuse blows, this indicates a fault. The cause should be promptly located and fixed.

Make sure that each fuse cover is securely in place after use.

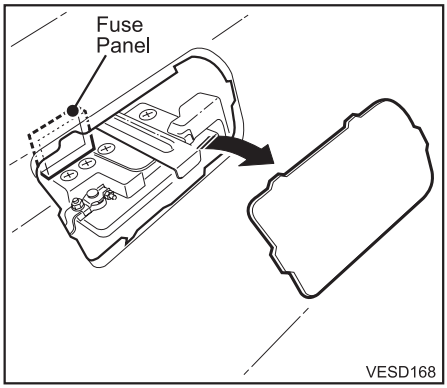
WARNING

- When replacing a fuse be sure to use a fuse of the specified amperage.
- Never install a wire or similar as it could damage electrical components and cause a fire.
- Any improper alterations to the electrical system may cause a fire hazard and engine damage. To maintain your own safety and that of the vehicle, have any work involving the electrical system or the replacement of high current fuses or relays carried out by your Holden Dealer.

FUSE REPLACEMENT cont.

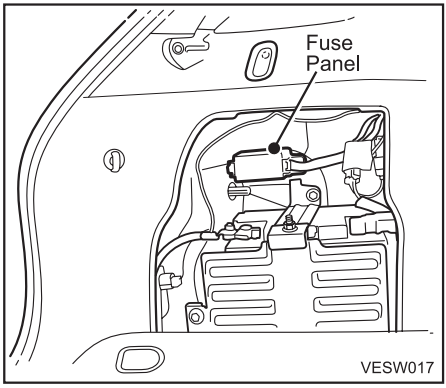
SEDAN BOOT FUSES AND RELAYS

The fuse panel is located on the left hand side of the boot, above the battery. Remove the battery compartment cover to gain access.



SPORTWAGON CARGO AREA FUSES AND RELAYS

The fuse panel is located on the left side of the cargo area, above the battery. To remove the battery compartment cover, refer to *Rear lamps* further on in this chapter.



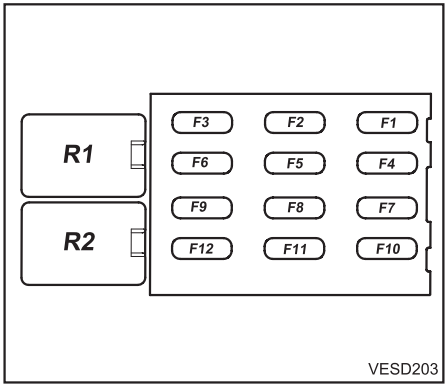
Boot (Sedan) or cargo area (Sportwagon) fuse and relay index

Fuses:

F1 - REAR SEAT ENTERTAINMENT.....(10A)
F2 - AMPLIFIER .....(30A)
F3 - NAVIGATION/ TELEMATICS/PHONE .....(10A)
F4 - RADIO & INFOTAINMENT ..(15A)
F5 - INST/DISP/RFA/DLC .....(10A)
F6 - SPARE
F7 - TRAILER.....(30A)
F8 - SPARE
F9 - SPARE
F10 - ECM BATT .....(15A)
F11 - RVC SENSE .....(7.5A)
F12 - FUEL PUMP.....(20A)

Relays:

R1 - SPARE
R2 - SPARE

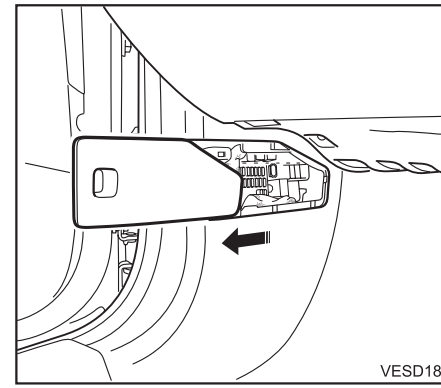


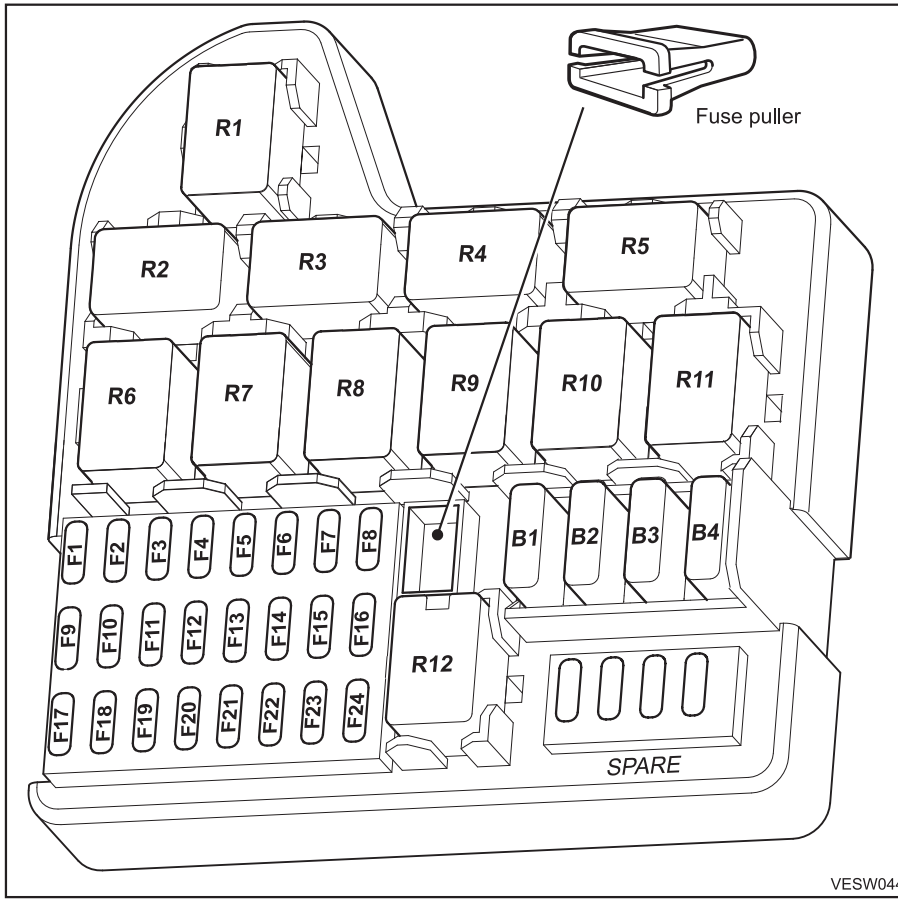
FUSE REPLACEMENT cont.

CABIN FUSES AND RELAYS

The fuse panel is located in the left hand side kick panel.

Use the slot in the fuse panel cover and slide rearwards to reveal the fuse panel.





FUSE REPLACEMENT cont.

Cabin fuse and relay index

Circuit breakers:

B1 - WINDOW BATTERY ..... (20A)
B2 - POWER WINDOWS ..... (20A)
B3 - POWER SEATS ..... (20A)
B4 - SPARE

Fuses:

F1 - SIR (SRS) ..... (10A)
F2 - REAR END RELEASE/
SEDAN..... (10A)
WAGON ..... (30A)
F3 - DOOR LOCKS ..... (25A)
F4 - INADVERT POWER/
LED DIM..... (15A)
F5 - COURTESY LIGHTS/RT
FT TURN SIGNAL..... (15A)
F6 - TURN SIGNAL RIGHT,
SIDE AND REAR ..... (15A)
F7 - SPARE
F8 - TURN SIGNALS
LEFT-LAMPS ..... (15A)
F9 - BCM LOGIC ..... (10A)
F10 - STOP LAMPS/
PARK ASSIST ..... (15A)
F11 - CONSOLE LIGHTING..... (15A)
F12 - IGN SW/THEFT ..... (2A)
F13 - CIGAR LIGHTER* ..... (20A)
F14 - FRONT APO (AUXILIARY
POWER OUTLET) ..... (20A)
F15 - OUTSIDE MIRROR/RPA
OPTION ..... (2A)
F16 - PHONE/KEY LK/ISRVM/
RAIN SENSOR ..... (10A)
F17 - SUNROOF ..... (20A)
F18 - REAR WIPER ..... (20A)
F19 - SPARE
F20 - SPARE
F21 - SPARE
F22 - SPARE
F23 - STRG WHEEL
ILLUMINATION ..... (2A)
F24 - RAP CONTROL PWR WDO... (2A)

Relays:

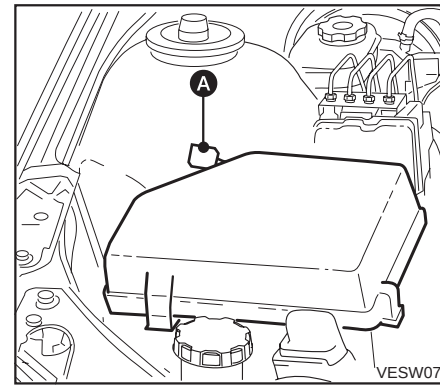
R1 - RAP-RETAIN ACCESSORY
POWER RELAY
R2 - ALL DOOR LOCK RELAY
R3 - PAS DOOR UNLOCK RELAY
R4 - SPARE
R5 - REAR END RELEASE
R6 - DRIVERS DOOR
UNLOCK RELAY
R7 - SPARE
R8 - ACCESSORY POWER RELAY
R9 - SPARE
R10 - SPARE
R11 - SPARE
R12 - FUEL PUMP RELAY
(LY7/L76/L98/LS3 ONLY)

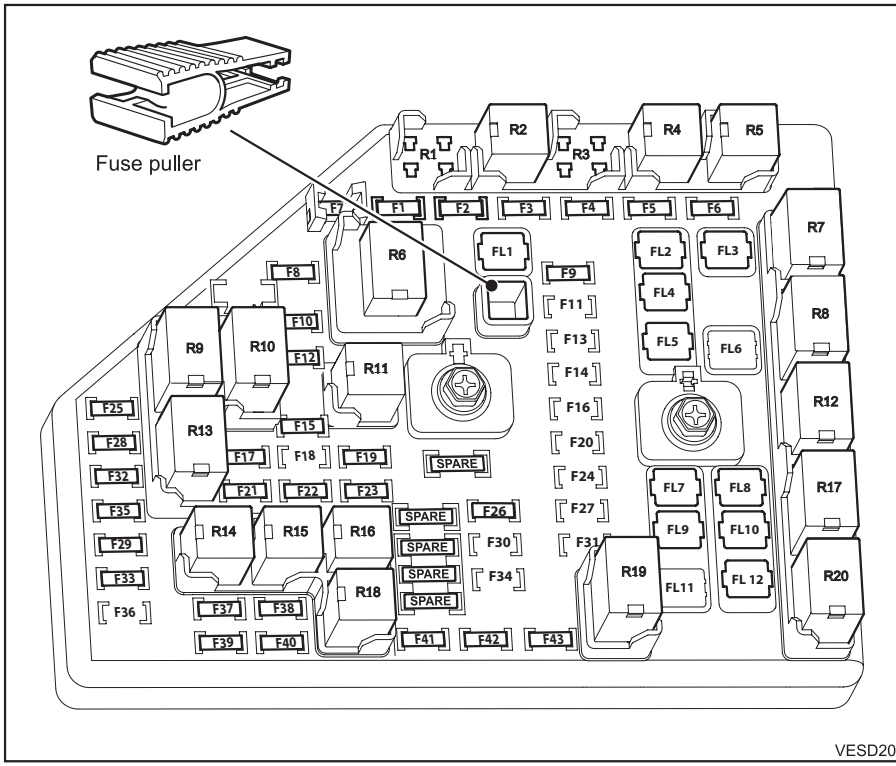
FUSE REPLACEMENT cont.

ENGINE COMPARTMENT FUSES AND RELAYS

This is the main fuse/relay box. Remove the clip-on cover to gain access.

Ⓐ Vacuum pump relay (R21).





FUSE REPLACEMENT cont.

Engine compartment fuse and relay index

Fuses:

FL1 - BRAKE VACUUM PUMP ....(20A)
FL2 - REAR DEFOG .....(40A)
FL3 - ABS MOTOR.....(40A)
FL4 - BATT MAIN 3 .....(50A)
FL5 - BATT MAIN 1 .....(50A)
FL6 - SPARE
FL7 - BATT MAIN 2 .....(50A)
FL8 - STARTER.....(40A)
FL9 - HVAC BLOWER MOTOR....(40A)
FL10 - FAN 1 ENGINE COOLING (RIGHT).....(30A)
FL11 - SPARE
FL12 - FAN 2 ENGINE COOLING (LEFT) .....(30A)
F1 - COMM ENABLE.....(10A)
F2 - HVAC BATT.....(10A)
F3 - BACK UP LAMP.....(15A)
F4 - FOG LAMPS (FRONT) .....(15A)
F5 - ABS VALVES.....(25A)
F6 - SPARE
F7 - HEADLAMP WASH.....(30A)
F8 - HORN.....(15A)
F9 - TCM .....(15A)
F10 - LEFT LOW BEAM (BASE/HID).....(10/20A)
F11 - SPARE
F12 - RIGHT LOW BEAM (BASE/HID).....(10/20A)
F13 - SPARE
F14 - SPARE
F15 - FRONT WIPER .....(30A)
F16 - SPARE
F17 - HORN THEFT .....(10A)
F18 - SPARE
F19 - RIGHT HIGH BEAM.....(10A)
F20 - SPARE
F21 - FRONT WASHER (WSW)...(15A)
F22 - SPARE
F23 - LEFT HI BEAM.....(10A)
F24 - SPARE
F25 - REVERSE LOCKOUT/ TOSS .....(15A)
F26 - REAL TIME DAMPING.....(25A)
F27 - SPARE
F28 - ECM 1 (LY7/L76/L98/LS3)/ ODD COILS/INJECTORS (LF1/LLT).....(15A)
F29 - EVEN COILS/ INJECTORS.....(20A)
F30 - SPARE
F31 - SPARE
F32 - EMISSION 2.....(15A)
F33 - EMISSION 1.....(15A)
F34 - SPARE
F35 - ODD COILS/INJECTORS (LY7/L76/L98/LS3)/ ECM 1 (LF1/LLT).....(15A)
F36 - SPARE
F37 - SPARE
F38 - IGNITION/MISC .....(10A)
F39 - IGNITION ENGINE/FSCM ..(15A)
F40 - AIRBAGS .....(10A)
F41 - SPARE
F42 - RIGHT PARK LAMP.....(10A)
F43 - LEFT PARK LAMP .....(10A)

Relays:

R1 - SPARE
R2 - COMM ENABLE RELAY
R3 - SPARE
R4 - BACK UP LAMPS RELAY
R5 - FOG LAMP RELAY-FRONT
R6 - HEADLAMP-LO BEAM RELAY
R7 - HEADLAMP WASH RELAY
R8 - RR-DEFOG RELAY
R9 - FRONT WIPER HIGH RELAY
R10 - FRONT WIPER LOW RELAY
R11 - HEADLAMP-HI BEAM RELAY
R12 - CRANK RELAY
R13 - POWER TRAIN RELAY
R14 - IGNITION RELAY
R15 - FRONT WASH RELAY
R16 - HORN RELAY
R17 - FAN 1 RELAY (ENGINE COOLING)
R18 - PARK LAMPS RELAY
R19 - FAN 2 RELAY (ENGINE COOLING)
R20 - FAN 3 RELAY (ENGINE COOLING)
R21 - VACUUM PUMP RELAY

BULB REPLACEMENT

Note If unsure of the bulb replacement process for any of the lamps, please have the work carried out by a suitably trained service technician.

NOTES WHEN REPLACING BULBS

- Switch the ignition off (LOCK position) and remove the key.
- Switch off the related switch.
- It is important to fit only bulbs of the specified wattage.
- Do not touch bulbs or reflectors with bare hands. Greasy fingers cause stains which evaporate, eventually resulting in a dull reflector. Grease spots on Halogen bulbs will, within a short time, lead to bulb failure. Clean stained bulbs with methylated spirits.

BULBS TO BE CHANGED BY A HOLDEN DEALER

- Fog lamps*.
- Instrument panel lamps.
- Rear high level stop lamp.
- Boot lamp (Sedan).
- Vanity mirror lamps*.
- Footwell lamps*.
- Exterior mirror lamps*.
- Front interior dome/reading* lamps.

FRONT LAMPS

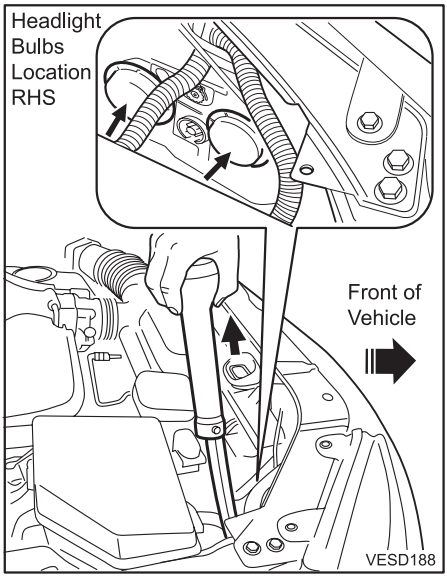
To gain access to the front park bulbs, front turn signal bulbs, high and low beam bulbs:

1. Open the bonnet and locate the coolant reservoir. Refer to *Under bonnet checks* in chapter 7.

BULB REPLACEMENT cont.

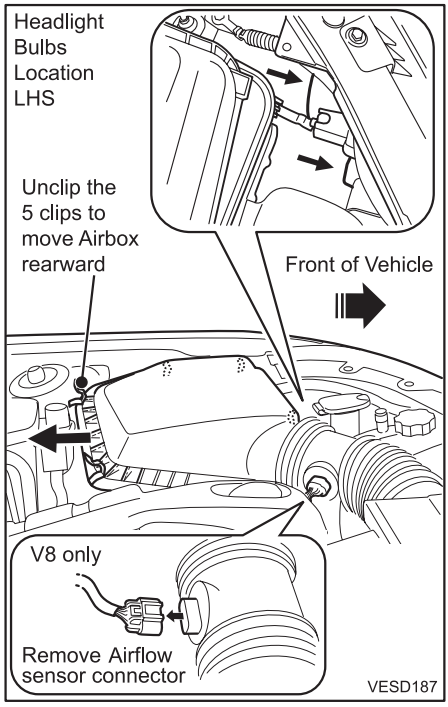
2. Pull up on the coolant reservoir filler neck to remove it and place it to one side. Let the filler neck drain before pulling it all the way out.

   Note Place a clean rag over the opening of the coolant reservoir after removing the filler neck.



3. Unclip the air filter box cover and move rearward. Disconnect the air flow meter connector (V8 only).

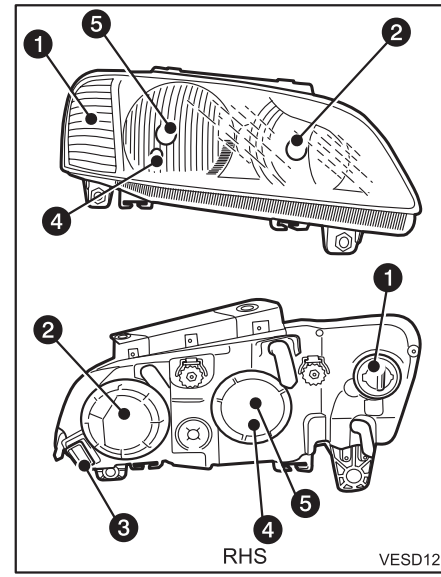
   Note When refitting the air filter box cover, ensure that the air filter element and cover are seated correctly.



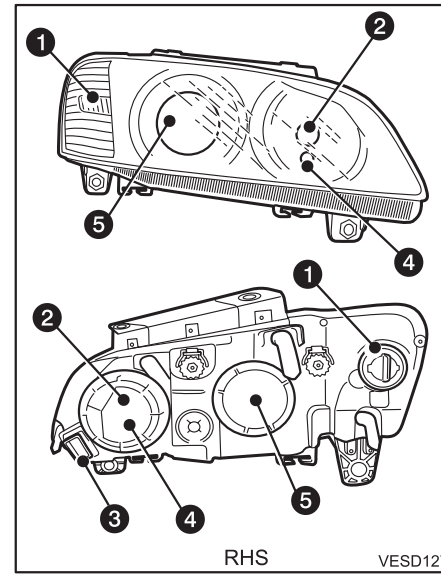
BULB REPLACEMENT cont.

Front lamp assembly

❶ Front turn signal lamp (PY21W amber bulb).
❷ Headlamp inboard high beam (H9 bulb, 65W).
❸ Headlamp wiring connector.
❹ Park lamps (W5W bulb).
❺ Headlamp outboard low beam (H7 bulb, 55W).



Note Depending on the model variant, the park lamp bulb ❹ is in either of the two positions shown.



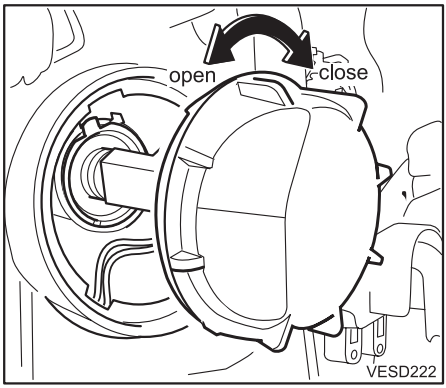
BULB REPLACEMENT cont.

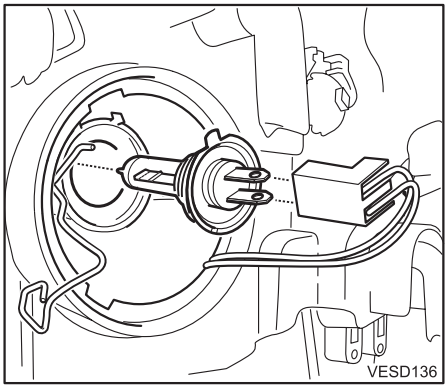
Headlamps – outboard low beam

1. Follow the steps described in section *Front lamps* previously in this chapter, to gain access to the lamp assembly.
2. Turn the outboard dust cap anti-clockwise and remove.

   Note Take care not to drop the dust cap into the engine compartment.
3. Pull to remove the wiring harness connector from the rear of the bulb.
4. Press and unclip the bulb spring retainer and pivot clear of the bulb.

   Note Check the orientation of the bulb tang for replacement.
5. Remove the bulb from the headlamp.
6. Fit the new bulb into the headlamp ensuring the tang is located correctly.
7. Refit the bulb spring retainer into its original position.
8. Install the wiring harness connector and dust cap (ensuring the rubber seal is in place).
9. Install components removed in step 1. Refer to *Front lamps* previously in this chapter.
10. Check lamp operation.





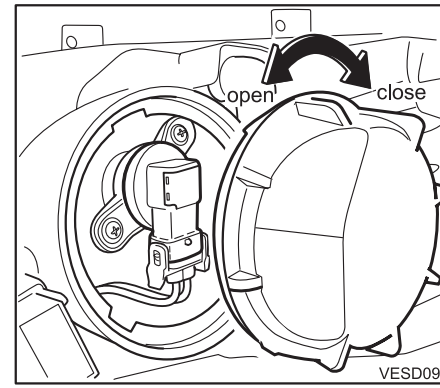
BULB REPLACEMENT cont.

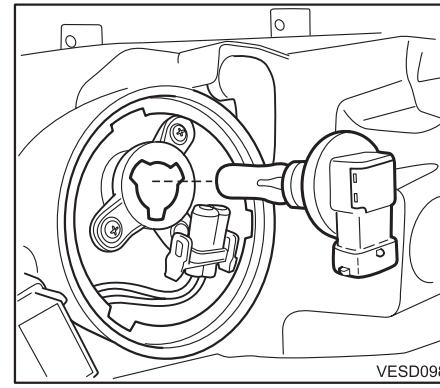
Headlamps – inboard high beam

1. Follow the steps described in section *Front lamps* previously in this chapter to gain access to the lamp assembly.
2. Turn the inboard dust cap anti-clockwise and remove.

   Note Take care not to drop the dust cap into the engine compartment.
3. Remove the wiring harness connector by squeezing the two tangs on the harness connector and pulling the connector downwards.
4. Twist the bulb anticlockwise to remove.

   Note The different sized locating tangs on the bulb base allow the bulb to sit correctly into the headlamp in one position only.
5. Twist the bulb clockwise to install.
6. Install the wiring harness connector and dust cap (ensuring the rubber seal is in place).
7. Install components removed in step 1. Refer to *Front lamps* previously in this chapter.
8. Check lamp operation.



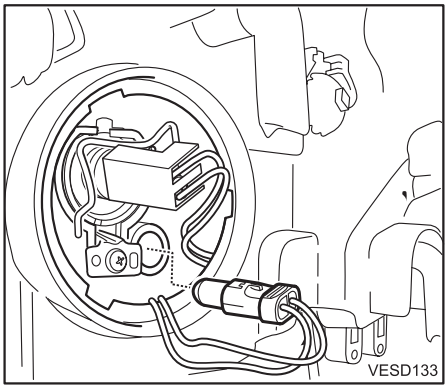


BULB REPLACEMENT cont.

Front park lamps*

1. Follow the steps described in section *Front lamps* previously in this chapter to gain access to the lamp assembly.
2. Remove the outboard low beam dust cover to access the bulb.

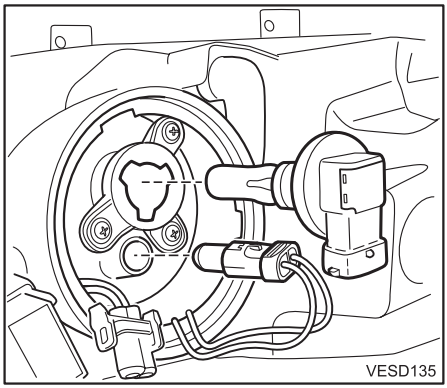
   Note Take care not to drop the dust cap into the engine compartment.
3. Remove the park lamp bulb holder by pulling it straight out.
4. Remove the park lamp bulb by pulling it straight out of the holder.
5. Insert the new bulb into the holder, then install the holder. Replace the low beam bulb dust cap (ensuring the rubber seal is in place).
6. Install components removed in step 1. Refer to *Front lamps* previously in this chapter.
7. Check lamp operation.



Front park lamps*

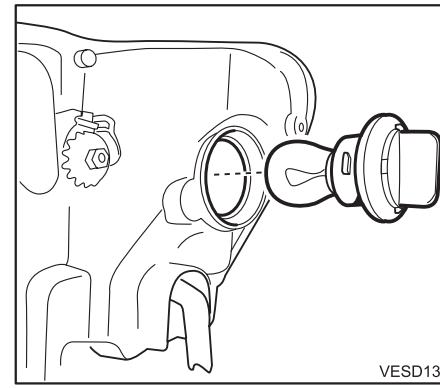
1. Follow the steps described in section *Front lamps* previously in this chapter to gain access to the lamp assembly.
2. Remove the inboard high beam dust cover to access the bulb.

   Note Take care not to drop the dust cap into the engine compartment.
3. Remove the high beam bulb to gain access to the park lamp bulb, refer to *Headlamps – inboard high beam* previously in this chapter.
4. Remove the park lamp bulb holder by pulling it straight out.
5. Remove the park lamp bulb by pulling it straight out of the holder.
6. Insert the new bulb into the holder, then install the holder. Install the high beam bulb and dust cap (ensuring the rubber seal is in place).
7. Install components removed in step 1. Refer to *Front lamps* previously in this chapter.
8. Check lamp operation.



BULB REPLACEMENT cont.

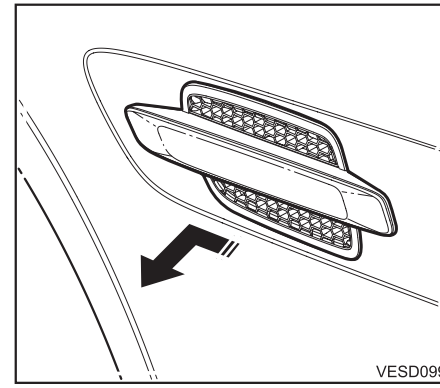
Front turn signal



1. Follow the steps described in section *Front lamps* previously in this chapter to gain access to the lamp assembly. To aid access, remove the outboard dust cap.

   Note Take care not to drop the dust cap into the engine compartment.
2. Turn the bulb holder anticlockwise and remove.
3. Lightly press the bulb and twist anticlockwise out of the holder.
4. Insert the new bulb and install the bulb holder. Ensure that the same colour bulb is used.
5. Install components removed in step 1. Refer to *Front lamps* previously in this chapter.
6. Check lamp operation.

Side turn signal (W5W bulb)



1. Grasp the lens at the rear, push forwards and pull away from the body of the vehicle. Separate the bulb holder from the lens assembly by rotating the bulb holder anticlockwise.
2. Remove the bulb by pulling it straight out of the holder.
3. Insert the new bulb into the bulb holder. Install the bulb holder into the lens housing.

   Note The bulb holder only fits into the lens housing one way. Therefore, keep turning the bulb holder clockwise until it fits into place and can be tightened.
4. When inserting the lamp, first locate the rear of the housing into the body panel of the vehicle before pushing the front inwards to engage the clip.
5. Check lamp operation.

BULB REPLACEMENT cont.

REAR LAMPS

Sedan rear lamp access

To gain access to the rear turn signal, stop/tail and reverse bulbs:

1. Open the boot.
2. Raise the spare wheel cover and attach the T-piece to the boot lid. Refer to *Changing a flat tyre* previously in this chapter.
3. There are two types of fastening systems for the plastic boot trim:
   - Using a flat-blade screwdriver carefully pry out the two retaining pins*.

   Note When replacing the retaining pins push them directly into the holes.

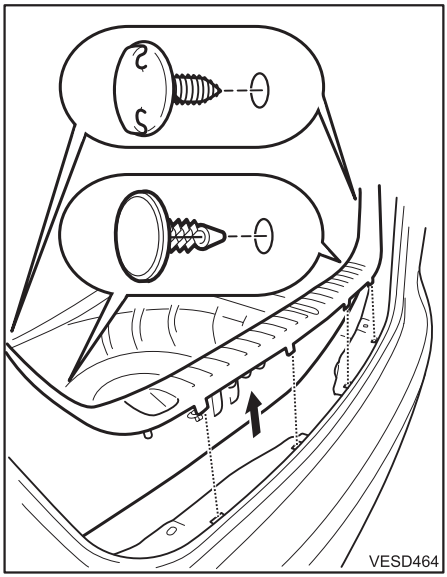
   - Unscrew (anticlockwise) and remove the two T shaped retaining screws.

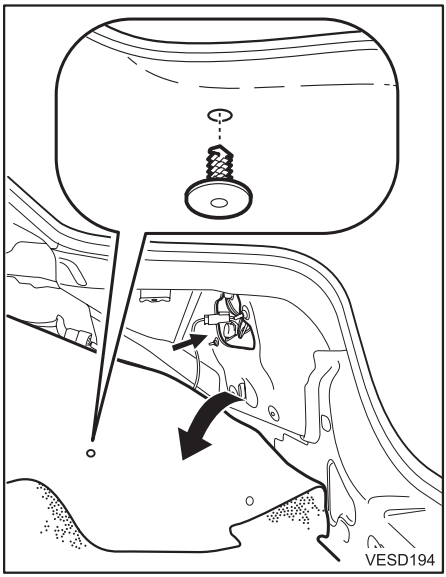
   Note If a convenience net* is fitted there will be four T shaped retaining screws.
4. Grasp the plastic boot trim and pull directly upwards to remove.

   Note

   - When replacing the trim, align the guide tabs with the holes and push the trim down.
   - When the trim is refitted ensure the lip of the rubber boot seal is positioned on top of the trim.
5. Remove the boot lining securing pin(s) by turning anticlockwise and pulling down at the same time.
6. Lower the spare wheel cover.
7. Pull the boot lining away to reveal the rear of the lamp.

   Note When replacing the boot lining securing pin(s), push it directly into the hole(s).



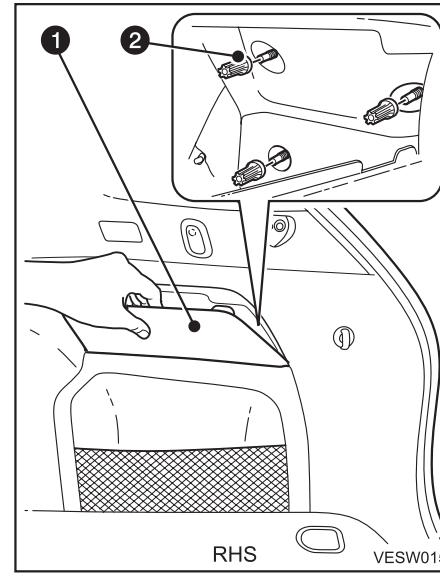


BULB REPLACEMENT cont.

Sportwagon rear lamp access

To gain access to the rear turn signal, stop/tail and reverse bulbs:

1. Open the tailgate.
2. To access the right side lamp, remove the cover ❶ by carefully prying the top of the cover away from the cargo area trim.

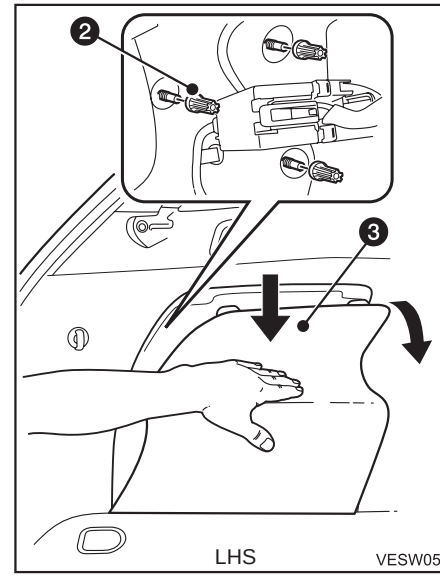


Battery compartment cover removal:

To access the left side lamp, remove the battery compartment cover ❸. Carefully push down at the centre of the cover to release it from the cargo area trim.

3. Undo the three lamp assembly securing nuts ❷.

Note Avoid dropping the nuts.

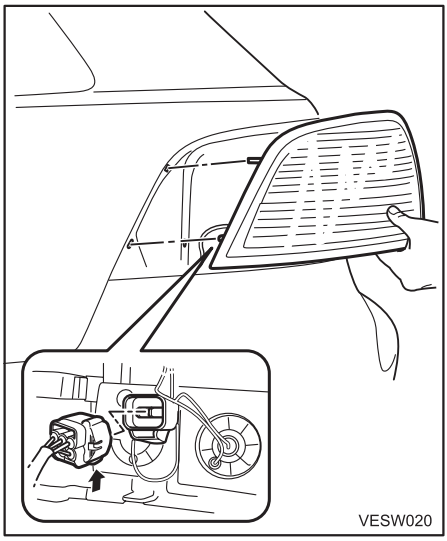


BULB REPLACEMENT cont.

4. Carefully remove the lamp assembly from the vehicle.

   From the rear of the lamp, disconnect the wiring connector.

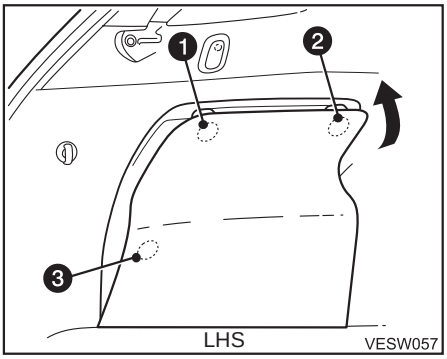
   Note Push the tab at the bottom of the connector to remove.

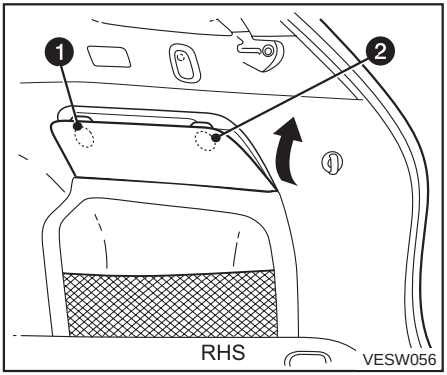


Battery compartment cover installation:

To install either of the access covers, align the locating tabs along the bottom edge of the cover with the slots in the trim.

Carefully push the cover in the sequence and positions shown until it engages securely.

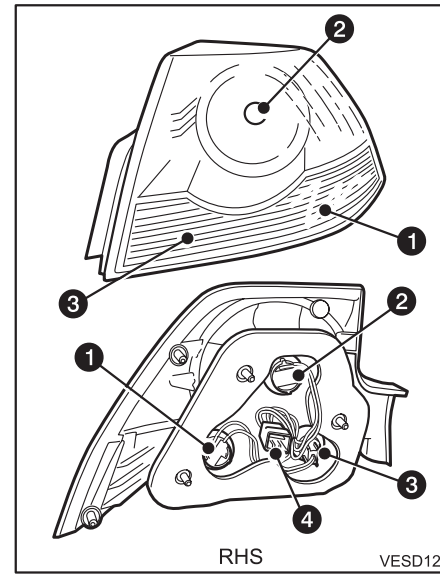




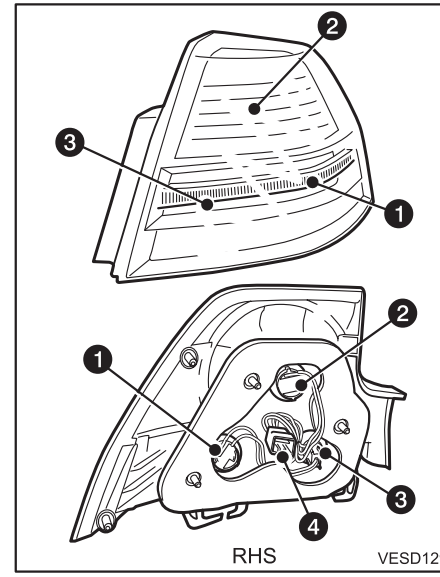
BULB REPLACEMENT cont.

Sedan rear lamp assembly

1. Turn signal lamp (PY21W amber bulb).
2. Stop/tail lamp (P21/5W bulb).
3. Reverse lamp (P21W bulb).
4. Rear lamp wiring connector.



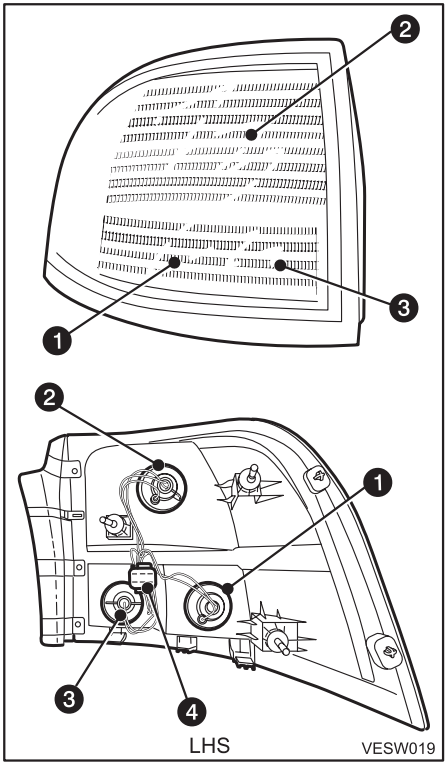
Note Depending on model variant the outside appearance of the lamp will be different.



BULB REPLACEMENT cont.

Sportwagon rear lamp assembly

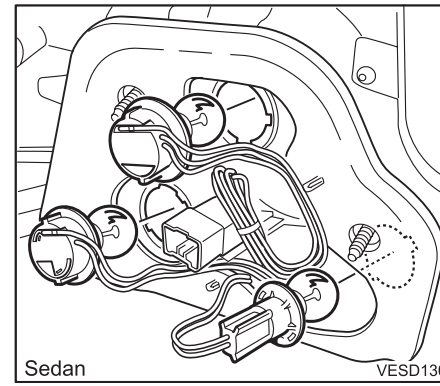
❶ Turn signal lamp (PY21W amber bulb).
❷ Stop/tail lamp (P21/5W bulb).
❸ Reverse lamp (P21W bulb).
❹ Rear lamp wiring connector.

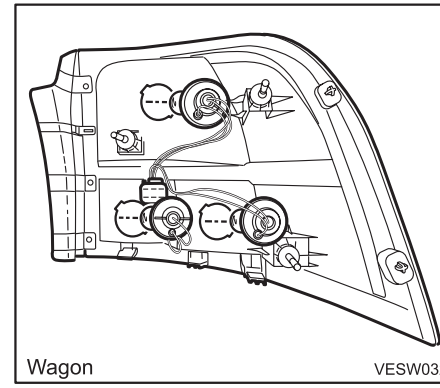


BULB REPLACEMENT cont.

Rear turn signal, stop/tail, reverse

1. Follow the steps described in section *Rear lamps* previously in this chapter to gain access to the lamp assembly.
2. From the rear of the assembly, turn the bulb holder anticlockwise to release it from its housing.
3. Lightly press the bulb and twist anticlockwise out of the holder.
4. Install the new bulb into the bulb holder by pushing it into the holder and turning it clockwise. Ensure that the same colour bulb is used.
5. Install the bulb holder into the lamp.
6. Install the components removed in step 1. Refer to *Rear lamps* previously in this chapter.
7. Check lamp operation.





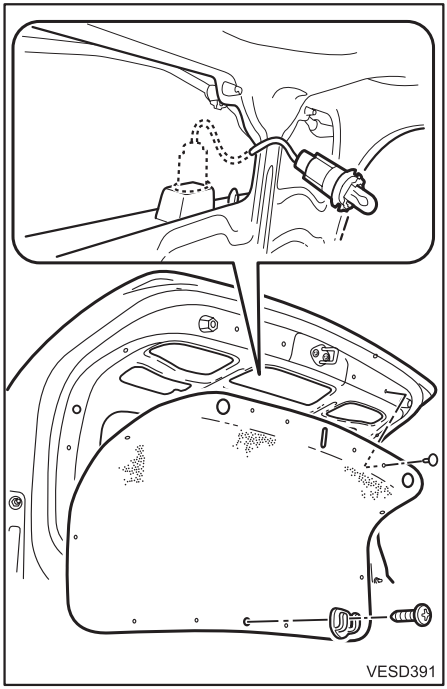
BULB REPLACEMENT cont.

NUMBER PLATE LAMP (W5W BULB)

Sedan

1. Open the boot.
2. Using a Phillips head screwdriver, remove the clip at the lower edge of the boot lid.
3. Remove the 12 boot lid lining* securing pins by carefully prying them out with a flat-blade screwdriver.
4. Carefully remove the boot lid lining* panel.

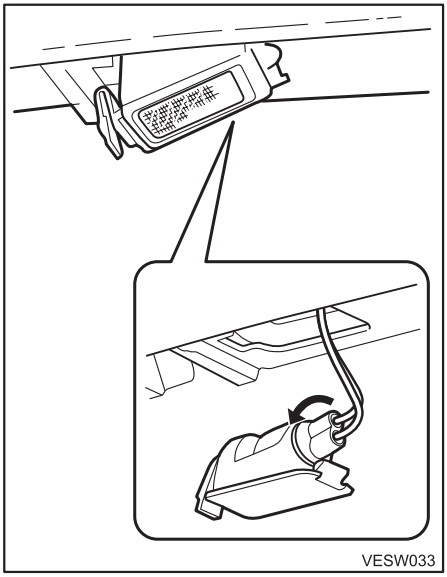
   Note Avoid bending the boot lid lining* panel.
5. Remove the bulb holder from the lamp housing by rotating the bulb holder anticlockwise. Pull the bulb out of the bulb holder.
6. Push the new bulb into the bulb holder. Install the bulb holder into the lamp housing by rotating the bulb holder clockwise.
7. Reinstall the boot lining in the reverse order.
8. Check lamp operation.


VESD391

Sportwagon

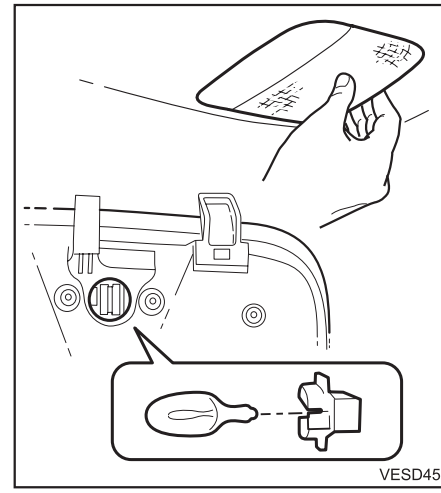
1. Push the locking tang at the end of the lamp housing towards the lens and pull the lamp assembly downwards.
2. Remove the bulb holder from the lamp housing by rotating the bulb holder anticlockwise. Pull the bulb out of the bulb holder.
3. Push the new bulb into the bulb holder. Install the bulb holder into the lamp housing by rotating the bulb holder clockwise, ensuring that the seal is undamaged.

   Note The lamp assembly can only be fitted into the number plate surround in one direction.
4. Engage the fixed tang into the number plate surround, then push the lamp upwards to engage the locking tang.
5. Check lamp operation.


VESW033

BULB REPLACEMENT cont.

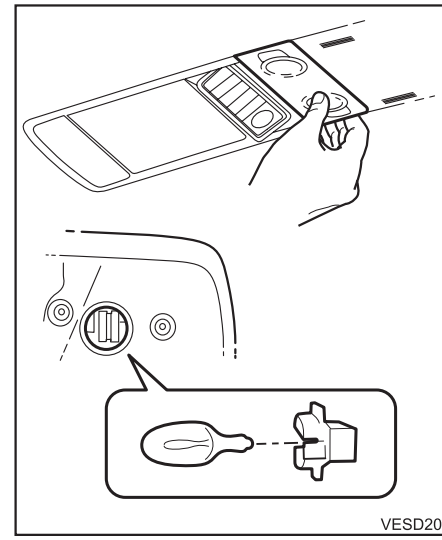
INTERIOR LAMPS


VESD450

Rear dome/reading* lamps (W5W bulb)

To access the rear interior dome/reading lamp bulb:

1. Prise the forward edge of the dome lamp downwards, using only fingers.
2. From the rear side, remove the bulb holder from the lamp housing by rotating the bulb holder anticlockwise. Pull the bulb out of the bulb holder.
3. Push the new bulb into the bulb holder. Install the bulb holder into the lamp housing by rotating the bulb holder clockwise.
4. Refit the lamp by engaging rearward facing locating tabs, then push the forward facing edge upward into the head lining until firmly in place.
5. Check the lamp operation.


VESD207

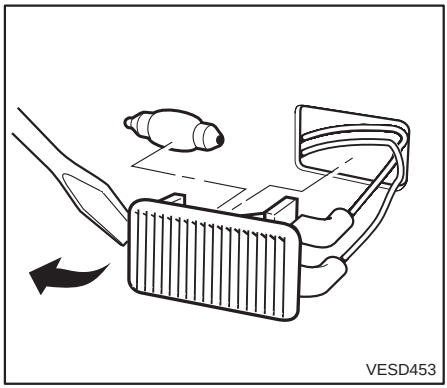
Rear dome/reading lamps with RSE* (W5W bulb)

1. If Rear Seat Entertainment (RSE)* is fitted, pull down on the left or right hand edge of the lamp section using only fingers.
2. From the rear side, remove the bulb holder from the lamp housing by rotating the bulb holder anticlockwise. Pull the bulb out of the bulb holder.
3. Push the new bulb into the bulb holder. Install the bulb holder into the lamp housing by rotating the bulb holder clockwise.
4. Refit the lamp section by pushing it directly upward into the console until firmly in place.
5. Check lamp operation.

BULB REPLACEMENT cont.

GLOVEBOX LAMP*, DOOR COURTESY LAMPS* AND CARGO AREA (SPORTWAGON) (FESTOON BULB, 5W)

1. Gently prise away the lens housing with a fine flat-bladed screwdriver.
2. Pull the tab holding the bulb (opposite end to wiring) backwards and pull the bulb out. To install the new bulb, first pull the tab backwards. When the new bulb is in place, feed the wiring back into the cavity and push the lens housing back into place.



NOTES

CHAPTER 7

Weekly checks

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- Clutch/brake* fluid 7-16
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- Washer fluid 7-19

Battery 7-20

*The asterisk signifies equipment options not in all vehicles, model variants, engine options, optional equipment and Genuine Holden Accessories (and Parts).

EXTERIOR CHECKS

MISCELLANEOUS CHECKS

As well as taking the vehicle to be serviced, there are a few simple, weekly checks that the owner/operator is recommended to make. These are shown on the following pages.

WARNING

- If the engine temperature is high, the cooling fan may remain on for several minutes after switching off the ignition. Therefore, the engine cooling fan can start working unexpectedly, even when the engine is not running and the ignition is off.
- Electronic ignition systems have a high ignition power. Do not touch the ignition system; this could be highly dangerous.

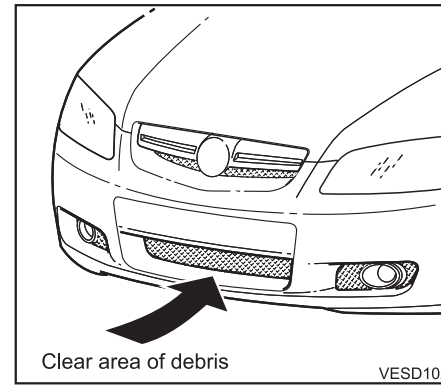
Perform the following checks regularly to ensure a minimum level of safety is maintained.

Check that:

- all exterior lamps are working and that their appropriate indicator lamps on the instrument panel illuminate.
- mirrors and glass are clean and not scratched.
- the automatic transmission* gear selector indicator correctly lines up next to the gear selected.
- the demister operates.
- the horn works.
- all seatbelts are in good condition and operate correctly.
- the seatbelt buckles are clean and operate correctly. Remember that seatbelts must never be worn twisted.

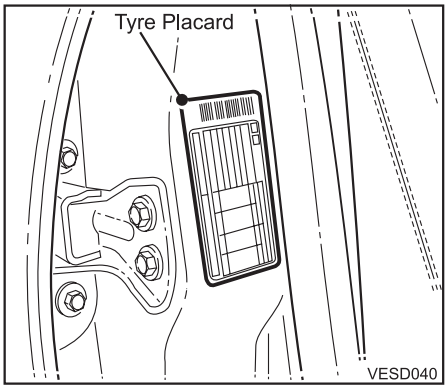
Note Check the air intake area in the front bumper for the build-up of leaves and road grime. Any build-up can impair the engine cooling efficiency of the vehicle.

Clear this area of debris whenever the vehicle is washed.



EXTERIOR CHECKS cont.

TYRES



Air pressure

Weekly checking of the air pressure in the tyres (including the spare) ensures your safety, as well as reducing fuel consumption and increasing the life of the tyres.

For constant long distance or rough road driving, daily checking is recommended.

The correct pressure for the tyres is shown on the tyre placard in the driver's door opening (B pillar).

Increase the inflation pressure in the tyres according to the load on the vehicle.

If the vehicle is heavily loaded, the recommended pressure for the tyres is increased (refer to the tyre placard on the vehicle). Because the tyres are operating under a greater load, the weekly air pressure check becomes even more important.

Therefore, if the vehicle is loaded to half the maximum payload, then the tyres should be inflated half way between the minimum and maximum pressures given on the tyre placard. Refer to *Loading the vehicle* in chapter 9.

Tyre inflation pressure increases when the tyres have been driven more than 2 km. Therefore, the pressure should be checked when the vehicle has been stationary for over 3 hours. If they must be checked immediately after driving, increase the pressure shown on the placard by 10 %.

Always use a tyre pressure gauge to check the tyres; simply looking at the tyres is not sufficient. If the pressure is too low, this can result in considerable tyre warm-up and internal damage, leading to tread separation and even to tyre blowout at high speeds.

If the pressure is too high, this can result in reduced traction, harsh vehicle ride, increased risk of tyre blowout and poor tyre wear.

Remember to replace any valve dust caps or extensions, as this stops dirt and moisture from fouling the valves.

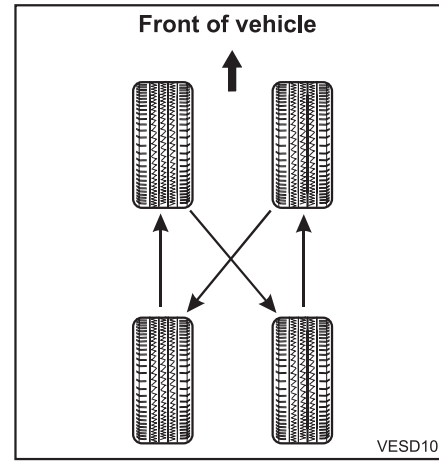
When checking the tyre air pressure, take a look at the condition of the tyre tread and inspect for stones or abnormal wear.

EXTERIOR CHECKS cont.

Tyre rotation

Front and rear tyres perform different jobs and can wear differently depending on factors such as:

- the types of roads driven on,
- driving habits,
- tyre pressures,
- wheel alignment and balance.
- Tyre condition is checked when the vehicle is serviced by a Holden Dealer. They are able to diagnose any unusual signs of wear. If the tyres are rotated, it is recommended that the balance be checked at the same time.



Alignment and balance

Improper wheel alignment can cause the tyres to wear faster and unevenly. It can also cause the vehicle to pull to one side.

Out-of-balance wheels and tyres can cause annoying vibration and uneven tyre wear. If you suspect any of these problems exist, have a wheel alignment and balance check, carried out by your Holden Dealer.

Replacement and repair

Replacing the factory fitted wheels and tyres with non-genuine wheels and tyres may affect the New Vehicle Warranty as well as the vehicle's insurance policy. Refer to the tyre placard on the vehicle for tyre size and load rating. Using a different size or type of tyre may affect such things as:

- ride,
- handling,
- speedometer accuracy,
- vehicle ground clearance,
- tyre clearance,
- snow chain clearance.

Take care when using tyres with heavy treads, including tyres made for better grip in the wet. At sustained high speeds, this type of tyre runs at higher temperatures than standard tyres. Only operate them within the limits recommended by the manufacturer. Any doubts about the tyres on the vehicle should be referred to your Holden Dealer.

EXTERIOR CHECKS cont.

VEHICLES FITTED WITH LOW PROFILE SPORTS TYRES

You have purchased a performance vehicle which has optimally matched low profile tyres fitted to provide you with the best possible ride comfort and running performance.

Low profile tyres are expected to experience greater wear than conventional tyres, depending on driving conditions. It is strongly recommended that you follow the following tyre care and maintenance instructions in order to maximise the service life of your tyres.

Tyre pressure

To assist in minimising tyre wear, please ensure that your tyres are properly inflated at all times. Information on the correct inflation pressure can be found on the tyre placard. Remember that tyre pressure should be checked when cold as tyre pressure will increase as the tyres warm up.

Tyre rotation and replacement

Please ensure that if required, you rotate your tyres approximately every year or 15,000 km, whichever occurs first. This is a recommended interval only. Please note that driving conditions, driving techniques, vehicle loading and weather may warrant more frequent tyre checks and rotation. It is recommended that you monitor tyre wear during service intervals and seek dealer advice if you have any queries.

It is recommended that you replace tyres with new ones that are identical to those fitted as standard equipment. However, if original tyres are not available please refer to the tyre placard for suitable replacement specifications.

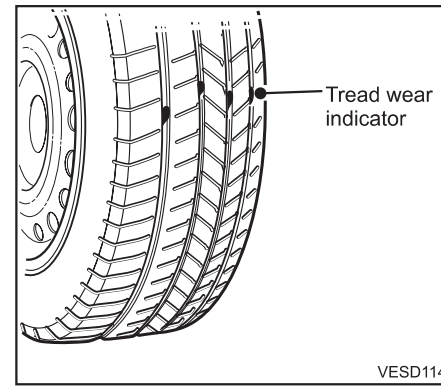
EXTERIOR CHECKS cont.

Tyres with a higher speed or load rating are acceptable, provided they are fitted to a suitable rim size.

Note New tyres should be fitted in pairs to the front. If replacing only one tyre, it should be paired on the same axle with the least worn of the other three.

Replace the tyres when:

- they are worn to the point where the tread indicators appear. The tyres originally fitted to the vehicle have built-in tread indicators. When only 1.5 mm of tread remains, these indicators show as plain bars across the tread pattern at regular intervals around the tyre.
- the tread or sidewall is cut, split, or cracked deep enough to expose the cord or fabric.
- the tyre has a bump or bulge in it, indicating some kind of internal damage.



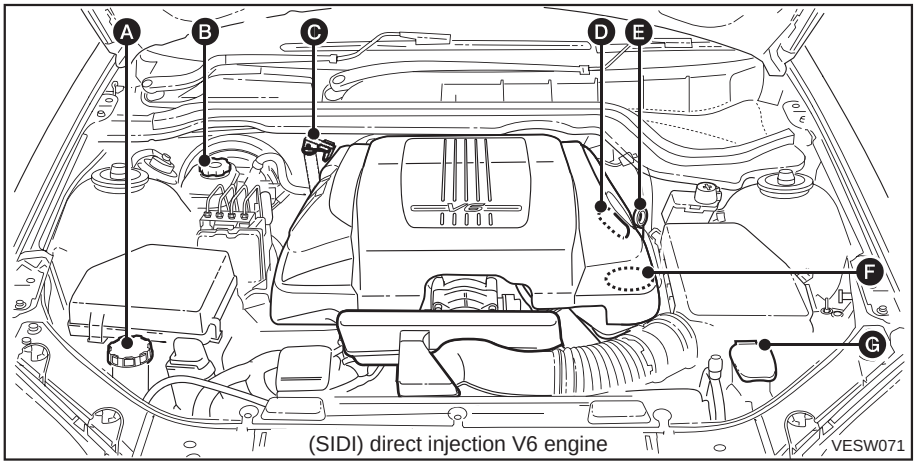
- the tyre has a puncture, cut or other damage which can not be repaired because of the size or location of the damage.
- the cord or fabric is showing.

WARNING

Do not attempt to drive on a flat tyre more than is necessary to stop safely. Driving even a short distance can damage the tyre and wheel beyond repair. Tyres which have been repaired or retreaded are not capable of being driven safely at high speeds. Therefore, their use is not recommended.

UNDER BONNET CHECKS

UNDER BONNET LAYOUT – V6 ENGINE



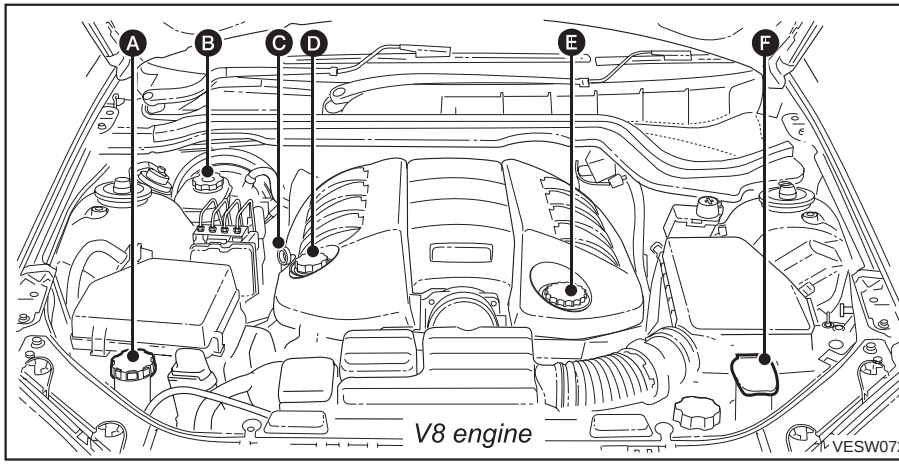
(SIDI) direct injection V6 engine

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Ⓑ Clutch/brake fluid reservoir* 7-16
Ⓒ Automatic transmission dipstick* (4 speed) 7-12
Ⓓ Engine oil filler cap 7-9
Ⓔ Dipstick for engine oil 7-9
Ⓕ Power steering fluid reservoir 7-18
Note For access to the cap, refer to *Engine cover removal* further on in this chapter.
Ⓖ Windscreen washer fluid reservoir 7-19

UNDER BONNET CHECKS cont.

UNDER BONNET LAYOUT – V8 ENGINE



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Ⓐ Engine coolant reservoir 7-13
Ⓑ Clutch/brake fluid reservoir* 7-16
Ⓒ Dipstick for engine oil 7-9
Ⓓ Engine oil filler cap 7-9
Ⓔ Power steering fluid reservoir 7-18
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UNDER BONNET CHECKS cont.

ENGINE OIL

Checking the engine oil level

The level is checked with the dipstick. For engine oil dipstick location, refer to *Under bonnet layout* previously in this chapter.

Check the level when the oil is warm, such as when stopping for fuel.

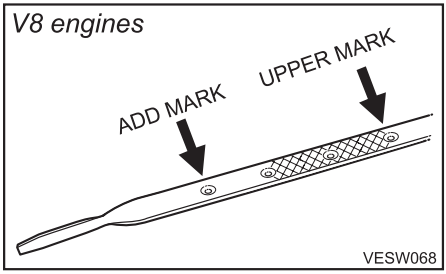
The vehicle must be on level ground.

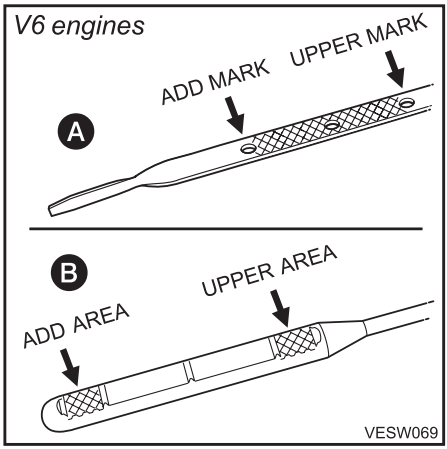
1. After switching off the ignition, wait at least 10 minutes for the oil to settle.
2. Remove the dipstick and wipe it clean with a clean cloth or paper towel. Insert the dipstick firmly all the way down, pause for several seconds then withdraw the dipstick and look at the oil level on it.
3.

- V8 and V6 type Ⓐ. If the level is at the ADD MARK, top up with enough oil to reach the UPPER MARK.

  Note The reading should never be over the UPPER MARK.
- V6 type Ⓑ. If the level is within the ADD AREA, top up with enough oil to reach within the UPPER AREA.

  Note The reading should never be over the UPPER AREA.





Adding engine oil

For engine oil specification, refer to *Specifications* in chapter 8.

1. Turn the engine oil filler cap anticlockwise and remove. Refer to *Under bonnet layout* previously in this chapter for engine oil filler cap location.
2. Pour the required amount of oil into the opening (clean up any spilt oil).
3. Wait a few minutes for the oil to settle, then check the oil level with the dipstick again. If still too low, add more oil.
4. When correct, screw the engine oil filler cap back on tightly and replace the dipstick.
5. If the oil level is checked when the oil is cold, do not run the engine first. Cold oil does not drain back into the oil pan fast enough to give an accurate reading.

Note Non-detergent and other low quality oils are specifically not recommended. The use of break-in oil, tune up compounds, friction reducing compounds and other supplemental additives are not recommended. Their use increases costs, may be detrimental to the operation of the vehicle and may void the New Vehicle Warranty, to the extent that Holden considers the non-recommended fluid to have affected the specifications or quality of the vehicle.

Engine oil change intervals

Refer to the Service/warranty booklet.

UNDER BONNET CHECKS cont.

Engine oil consumption

Every internal combustion engine uses a certain amount of oil, especially when running in. The engine is dependent on oil for lubricating critical areas, such as the cylinder walls, pistons, rings and valve stems. These parts are all subjected to high friction loads and will prematurely wear out without a constant supply of engine oil. A thin film of oil is left on the cylinder walls, some of which is carried into the combustion chamber and burnt during the combustion process. This also applies to the film of oil on the valve stems which is drawn into the combustion chamber and burnt.

There are several other factors that contribute to the rate of oil consumption in the vehicle's engine:

- Operation of the vehicle:

  High speed driving and heavy towing increases engine temperature, which lowers oil viscosity, causing more oil to reach the combustion chamber and get burnt away. Always check the oil level prior to towing or going on a long trip.

- Quality and grade of oil:

  Oil viscosity is a significant factor in oil consumption. If an oil which is too 'thin' (low viscosity) is used, the oil consumption will increase. Use only the recommended grades of oil.

- Oil level:

  Maintaining a proper oil level is also an important factor in controlling oil consumption. An over-full engine will splash oil onto the cylinder walls in quantities greater than the piston rings can control. This excess oil is drawn into the combustion chamber and burnt, or may result in aeration of oil in the sump causing damage to the engine.

- Dilution:

  When a vehicle is frequently driven on short trips, the engine often fails to reach normal operating temperatures. The oil becomes diluted by fuel and moisture that settles in the oil pan. This may raise the oil level creating a false reading on the oil level dipstick. For example, in a vehicle that has accumulated 1,500 km of short distance or intermittent city operation and has consumed a normal amount of oil, the level may not have dropped from the UPPER mark, due to dilution. If this vehicle is driven for some distance at highway speeds on a warm day, the dilution elements evaporate lowering the oil level. This sudden change in oil level can give the driver the impression that an excessive amount of oil has been lost in the highway operation.

UNDER BONNET CHECKS cont.

Measuring oil consumption

A simple consumption test can be performed if the driver is concerned by an apparent drop in the oil level.

Add sufficient oil to bring the level up to the UPPER mark on the dipstick (avoid overfilling). Take note of the odometer reading and check the oil periodically. When the level reaches the **ADD** mark, carefully measure the amount of oil required to return the level back to UPPER mark and note the odometer reading. The amount of oil added for the kilometres travelled over the duration of the test indicates the oil economy of the engine. Remember to check the oil level at the start and finish of the test on level ground and allow time for oil to drain down (approximately 10 minutes after engine is switched off). Avoid minor top ups (0.25 to 0.5 litre) when measuring oil consumption, as inaccuracies of oil quantity added, may cloud the result.

If, after taking into account the above factors, you are still concerned that your engine has excessive oil consumption then consult your Holden Dealer. Remember that an engine's oil consumption should not be judged until it has run at least 10,000 km.

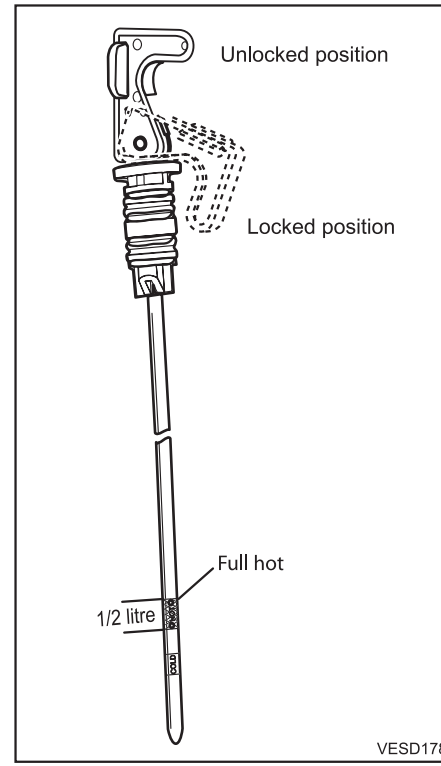
UNDER BONNET CHECKS cont.

AUTOMATIC TRANSMISSION FLUID LEVEL (4 SPEED)*

The dipstick handle on vehicles fitted with 4-speed automatic transmissions is located at the rear of the engine compartment, on the right side. Refer to *Under bonnet layout* previously in this chapter for automatic transmission dipstick location.

Note

- Dirt in the transmission can cause breakdowns, so be careful when checking or adding fluid.
- Check the fluid after the vehicle has been driven for at least 20 km to ensure the fluid is hot.



Checking transmission fluid level

1. Park the vehicle on level ground with the engine running.
2. Ensure that the transmission gear selector is in **P** (Park) and that the park brake is applied.
3. Unlock the handle and remove the dipstick.
4. Wipe it clean with a clean cloth or paper.
5. Insert the dipstick fully once more.
6. Remove it again and read the fluid level. The fluid level should be showing on the cross hatched Hot area. The level should never read over the full Hot mark.

Note On vehicles fitted with a 6 speed automatic transmission, the fluid will be checked when the vehicle is serviced by your Holden Dealer.

Adding transmission fluid

Use only Holden specified automatic transmission fluid. Refer to *Specifications* in chapter 8 for the correct type.

1. Add the fluid in the dipstick tube (the same opening as the dipstick is stored in).
2. Wait one minute for the oil to settle (clean up any spilt fluid).
3. Check the level on the dipstick with the engine running and add further fluid if necessary. Remember to always replace the dipstick and lock the handle down.

If the transmission fluid requires constant topping up, it could indicate that there is a leak or fault. Contact your Holden Dealer.

Note The cold markings on the dipstick should only be used as an indication when initially filling the transmission after the fluid has been completely drained. It should be re-checked when hot.

UNDER BONNET CHECKS cont.

ENGINE COOLANT

Note For all V6 engine variants, the coolant reservoir locations are in similar positions within the engine compartment.

Engine coolant level

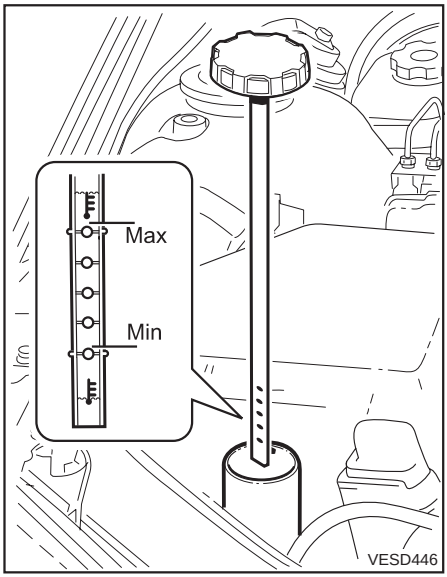
Check the coolant level at least once a week.

The cap for the coolant reservoir is yellow and has the word **DEXCOOL** marked on the top. Refer to *Under bonnet layout* previously in this chapter for coolant reservoir location.

Checking the coolant level

WARNING

Do not remove the radiator cap if the engine and radiator are still hot. Scalding fluid and steam can be blown out under pressure which could cause serious burns.



1. Ensure the ignition is switched off.
2. Turn the coolant dipstick cap one-eighth of a turn anticlockwise and slowly pull out the dipstick. There are Maximum and Minimum markings on the dipstick.
3. When the engine is cold, the coolant level should be at or above the Minimum mark on the dipstick. After the vehicle has been driven and the engine is at normal operating temperature, the level should be somewhere between half full and the Maximum mark.
4. If the coolant level is correct, replace the dipstick and turn the cap one-eighth of a turn clockwise to secure.

UNDER BONNET CHECKS cont.

Adding coolant

WARNING

Do not spill coolant on the vehicle's exterior surfaces as it can damage the paintwork. If you do, wash it off immediately.

Refer to *Specifications* in chapter 8 for engine coolant specifications and water-to-coolant ratio.

1. Mix a solution of Holden coolant and clean fresh water in a container as per the ratio specified.

   Note Failure to use the coolant or maintain the specified concentration may result in voiding the New Vehicle Warranty.
2. Pour the fluid into the coolant dipstick tube (the same opening that the coolant dipstick is stored in). Again check the level with the dipstick and add further fluid if necessary.
3. When the level is correct, replace the dipstick and turn the cap one-eighth of a turn clockwise to secure.

   Note Only replace the dipstick one way. The word **DEXCOOL** on the cap should be able to be read from the front of the vehicle.

In emergency situations, plain clean fresh water may be used temporarily until the correct Holden coolant is obtained (as soon as possible) from the nearest Holden Dealer.

Note If the coolant requires regular topping up, it could indicate that there is a leak or a fault. Contact your Holden Dealer as soon as possible.

How the engine coolant works

The specified coolant works in three ways:

- It contains special corrosion inhibitors.
- It helps the cooling system in hot weather by increasing the boiling point.
- It protects against freezing down to –37 °C, provided the specified concentration is maintained.

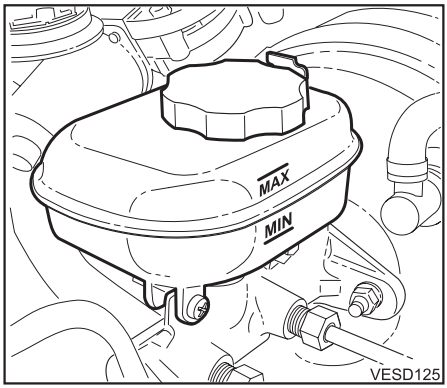
WARNING

Corrosion inhibitors and antifreeze fluids are poisonous. Use extreme care when handling. If swallowed, seek medical attention. Do not remove the coolant reservoir cap if the engine and radiator are still hot. Scalding fluid and steam can be blown out under pressure which could cause serious burns.

Refer to *Engine Overheating* in chapter 6 if the engine overheats or loses a lot of coolant.

UNDER BONNET CHECKS cont.

BRAKE FLUID



Brake fluid level

WARNING

Brake fluid is poisonous and corrosive and will damage the paint finish of the vehicle if spilt.

Check the brake fluid level in the brake fluid reservoir weekly.

Checking the brake fluid level

The fluid level is visible through the brake fluid reservoir. Refer to *Under bonnet layout* previously in this chapter for brake fluid reservoir location.

Maintain the level between the **MIN** and **MAX** markings.

If the fluid is between these levels, do not remove the reservoir cap, as brake fluid exposed to the atmosphere will quickly absorb moisture.

Adding brake fluid

1. Ensure that the ignition is switched off.
2. Wipe the sides of the cap clean and turn anticlockwise to remove.
3. Top up with heavy duty brake fluid which meets Holden specifications. Refer to *Specifications* in chapter 8 for the correct specification.

WARNING

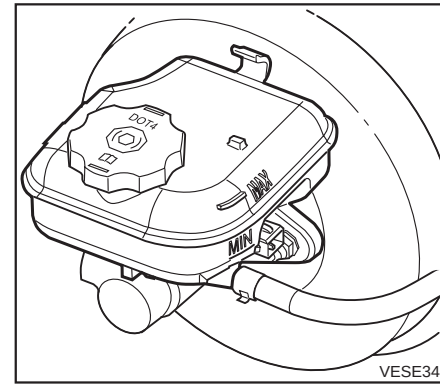
Use only new brake fluid. Use of old, used or inferior brake fluid may endanger the functioning of the brake system.

4. Secure the cap and clean up any spilt fluid.

   Note If the brake fluid reservoir requires constant topping up it could indicate that a fault exists. Contact your Holden Dealer immediately.

UNDER BONNET CHECKS cont.

CLUTCH/BRAKE FLUID (Manual transmission)*



Clutch/brake fluid level

Note On vehicles with manual transmission, the clutch fluid and brake fluid share a common reservoir.

WARNING

Clutch/brake fluid is poisonous and corrosive and will damage the paint finish of the vehicle if spilt.

Check the clutch/brake fluid level in the clutch/brake fluid reservoir weekly.

Checking the clutch/brake fluid level

The fluid level is visible through the clutch/brake fluid reservoir. Refer to *Under bonnet layout* previously in this chapter for clutch/brake fluid reservoir location.

Maintain the level between the **MIN** and **MAX** markings.

If the fluid is between these levels, do not remove the reservoir cap, as clutch/brake fluid exposed to the atmosphere will quickly absorb moisture.

Adding clutch/brake fluid

1. Ensure that the ignition is switched off.
2. Wipe the sides of the cap clean and turn anticlockwise to remove.
3. Top up with heavy duty brake fluid which meets Holden specifications. Refer to *Specifications* in chapter 8.

WARNING

Use only new fluid. Use of old, used or inferior fluid may endanger the functioning of the clutch/brake system.

4. Secure the cap and clean up any spilt fluid.

Note If the clutch/brake fluid reservoir requires constant topping up it could indicate that a fault exists. Contact your Holden Dealer immediately.

UNDER BONNET CHECKS cont.

ENGINE COVER REMOVAL

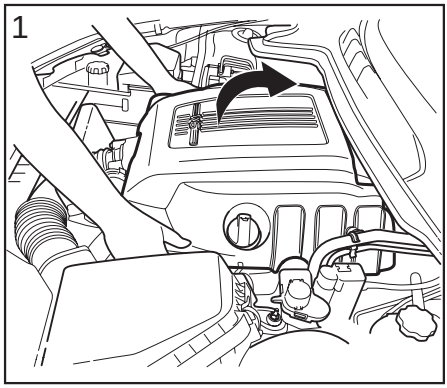
WARNING

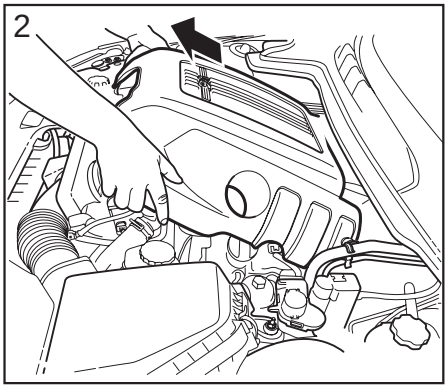
- Do not place hands on any under bonnet components when the engine is HOT or RUNNING.
- Before removing the engine cover, allow the engine to cool sufficiently.

Cover removal

The engine cover needs to be removed to access the power steering and radiator caps.

1. Switch the engine off, remove the ignition key, place the gear selector lever in **P** (park) and set the park brake firmly.
2. Open the bonnet. Grasp the cover at both front corners as shown in illustration 1 then carefully lift the cover upwards at the front approximately 15 cm.
3. Carefully pull the cover toward the front of the vehicle as shown in illustration 2. Store the cover in a safe location with its top side facing upwards.

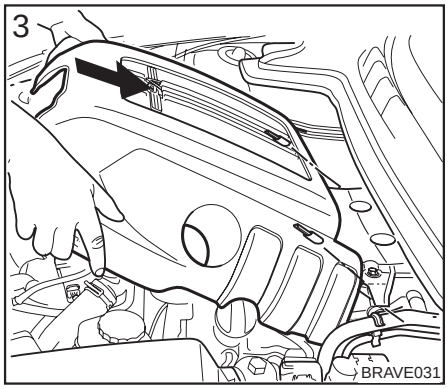




Cover replacement

1. Position the cover as shown in illustration 3 ensuring the cover is resting in its fully rearward position.

   Note There are two guide tabs at the rear of the cover that must engage before the cover can be lowered.
2. Carefully lower the front of the cover downward ensuring that the hole on the left side slides over the oil filler cap.
3. When the cover is resting correctly on the engine, gently press down on both front corners to engage the fasteners. Gently pull upwards on the cover to ensure it is securely fitted.



UNDER BONNET CHECKS cont.

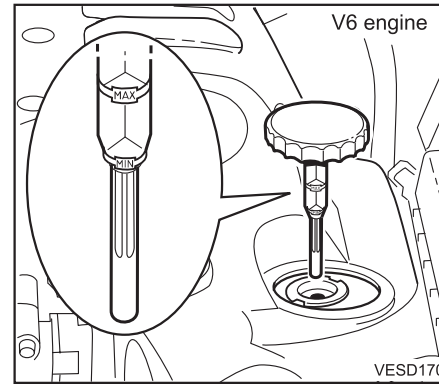
POWER STEERING FLUID

Power steering fluid level

Check the level after the vehicle has been driven for a while (at least 20 minutes) so that the fluid is warm. A convenient time is when stopping for fuel. The cold level check should only be used after the engine has not been running for at least 5 hours. However, the hot level check is always recommended.

Refer to *Under bonnet layout* previously in this chapter for power steering reservoir location.

Checking the power steering fluid level

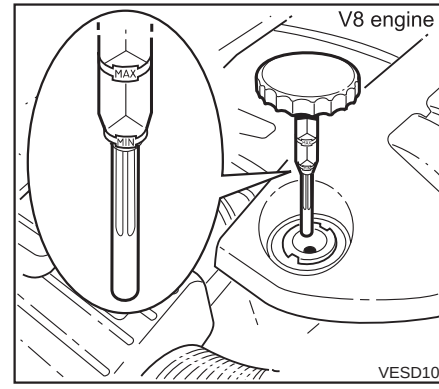


Note For vehicles fitted with a (SIDI) direct injection V6 engine, the power steering fluid reservoir is located in a similar position. To access the reservoir, refer to *Engine cover removal* previously in this chapter.

1. Wipe the sides of the cap clean.
2. Turn the cap anticlockwise until the cap can be lifted off. The **MIN** (cold) and **MAX** (hot) level markings are on the dipstick attached to the cap.

   When the engine is hot, the level should be at the hot **MAX** level.
3. When the engine is cold, the fluid level must be midway between **MIN** and **MAX** on the dipstick.

Adding power steering fluid



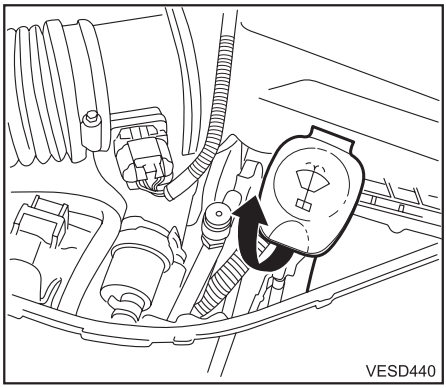
Refer to *Specifications* in chapter 8 for the correct power steering fluid to use.

1. Ensure the ignition is switched off.
2. Top up with power steering fluid which meets Holden specifications. Do not overfill the reservoir.
3. Secure the cap and clean up any spilt fluid.

   Note If the power steering fluid requires constant topping up, it could indicate that a fault exists. Contact your Holden Dealer.

UNDER BONNET CHECKS cont.

WASHER FLUID



Washer fluid level

The washer fluid reservoir has a blue flip top cap. Refer to *Under bonnet layout* previously in this chapter for washer fluid reservoir location.

The container shown supplies water to the front windscreen washer and rear window washer (Sportwagon).

Checking the washer fluid level

As washer fluid is constantly used, top up the level weekly.

Adding washer fluid

For a crystal clear windscreen, the correct amount of washer fluid additive can be added. Refer to your Holden Dealer.

Note Do not use ordinary soap or detergent as these not only froth up, but also damage the wiper rubbers.

Make sure the cap is secured.

BATTERY

WARNING

- Batteries emit an explosive gas mixture which may be ignited. Therefore, you should keep sparks and flames away from the battery at all times. Never smoke near a battery.
- Batteries contain sulphuric acid. If acid contacts skin or clothing, flush immediately with plenty of water. In case of eye contact, flush with plenty of water and contact a doctor immediately. Battery acid also damages paint and fabrics. To minimise damage, wash off immediately.
- Take care with all metal objects and tools including items you may wear (for example jewellery, rings and metal watch bands) near battery terminals.

REPLACEMENT BATTERY

The vehicle's battery is located:

- Inside the boot (Sedan) on the left, behind a small access panel.
- Cargo area (Sportwagon), on the left, behind an access panel.

  Refer to *Bulb replacement* in chapter 6 for cover removal (Sportwagon).

  Note For battery replacement, refer to your Holden Dealer or authorised repairer.

WARNING

- A specifically developed battery with a ventilation system is required for this vehicle. Any other standard battery may cause explosive gases to enter the rear compartment or passenger cabin.
- Do not remove the caps on the top of the battery. The battery supplied in the vehicle is maintenance free and does not require checking or filling.
- The battery vent tube must be installed correctly to ensure the explosive gases are vented outside the vehicle.
- Only use a manufacturer recommended battery as a replacement, otherwise the electric power management (EPM) system may not operate correctly.

VEHICLE BATTERY DISCONNECTION

The battery is recharged by the alternator when the engine is running. If the engine is not run for approximately 6 weeks, the battery may discharge, due to the power required by systems such as the security system. If the battery is disconnected it may discharge after approximately 12 weeks.

If the vehicle battery is disconnected when leaving the vehicle for a long period of time, it is recommended that the battery be trickle fed on a battery charger overnight, before installing it back into the vehicle.

If the vehicle battery is disconnected for any reason:

- Some trip computer displays will be reset.
- The personal identity key system* may forget some settings. The driver's adjustments will be remembered the next time the features are adjusted. Refer to *Personal identity keys* in chapter 2.

For emergency starting when the battery is flat, refer to *Flat battery* in chapter 6.

Note If the vehicle's battery is disconnected or discharged, the tailgate (Sportwagon) will not open normally. Refer to *Sportwagon tailgate lock* in chapter 2.

CHAPTER 8

Specifications

Page

Specifications – V6 engines 8-2

Specifications – V8 engines 8-5

General specifications 8-6

Identification labels 8-8

*The asterisk signifies equipment options not in all vehicles, model variants, engine options, optional equipment and Genuine Holden Accessories (and Parts).

SPECIFICATIONS – V6 ENGINES

Engine type	3.6L MULTIPOINT FUEL INJECTION V6
Engine capacity	3564 cc
Engine power and torque	Please refer to holden.com.au
Engine oil specification	SAE 5W-30 ILSAC GF4; API SM
Refill engine oil capacity	6.7 L approximately (including filter)
Coolant specification	50% clean fresh water and 50% Dexcool® anti-freeze coolant, conforming to specification number GM6277M
Coolant capacity	10 L approximately
Automatic transmission fluid	Dexron® VI
Differential oil	Castrol SAF Carbon Modified SAE 75W/85 API GL5 GM
Brake and clutch fluid	Dot 4 heavy duty brake fluid conforming to Holden specification number HN 2456
Power steering fluid	Dexron® VI
Fuel tank capacity	73 L
LPG* tank capacity	Approximate usable capacity 74 L
Battery	Maintenance free 12 V, with ventilation system. LN2 460 cold cranking amps (CCA), 85 minutes reserve capacity. LN3* 600 cold cranking amps (CCA), 120 minutes reserve capacity.

WARNING

Use only a manufacturer recommended battery with a ventilation system. Use of other batteries may effect the electric power management system and allow explosive gases into the vehicle cabin. Refer to your Holden Dealer or authorised repairer.

SPECIFICATIONS – V6 ENGINES cont.

Engine type	3.6L (SIDI) DIRECT INJECTION V6
Engine capacity	3564 cc
Engine power and torque	Please refer to holden.com.au
Engine oil specification	SAE 5W-30 ILSAC GF4; API SM
Refill engine oil capacity	6.7 L approximately (including filter)
Coolant specification	50% clean fresh water and 50% Dexcool® anti-freeze coolant, conforming to specification number GM6277M
Coolant capacity	10 L approximately
Automatic transmission fluid	Dexron® VI
Manual transmission fluid	SAE 75W-90 GL5 conforming to Esso specification number JWS2250C
Differential oil	Castrol SAF Carbon Modified SAE 75W/85 API GL5 GM
Brake fluid	Dot 4 heavy duty brake fluid conforming to Holden specification number HN 2456
Power steering fluid	Dexron® VI
Fuel tank capacity	73 L
Battery	Maintenance free 12 V, with ventilation system. LN2 460 cold cranking amps (CCA), 85 minutes reserve capacity. LN3* 600 cold cranking amps (CCA), 120 minutes reserve capacity.

WARNING

Use only a manufacturer recommended battery with a ventilation system. Use of other batteries may effect the electric power management system and allow explosive gases into the vehicle cabin. Refer to your Holden Dealer or authorised repairer.

SPECIFICATIONS – V6 ENGINES cont.

Engine type	3.0L (SIDI) DIRECT INJECTION V6
Engine capacity	2986 cc
Engine power and torque	Please refer to holden.com.au
Engine oil specification	SAE 5W-30 ILSAC GF4; API SM
Refill engine oil capacity	6.7 L approximately (including filter)
Coolant specification	50% clean fresh water and 50% Dexcool® anti-freeze coolant, conforming to specification number GM6277M
Coolant capacity	10 L approximately
Automatic transmission fluid	Dexron® VI
Differential oil	Castrol SAF Carbon Modified SAE 75W/85 API GL5 GM
Brake fluid	Dot 4 heavy duty brake fluid conforming to Holden specification number HN 2456
Power steering fluid	Dexron® VI
Fuel tank capacity	73 L
Battery	Maintenance free 12 V, with ventilation system. LN2 460 cold cranking amps (CCA), 85 minutes reserve capacity. LN3❄ 600 cold cranking amps (CCA), 120 minutes reserve capacity.

WARNING

Use only a manufacturer recommended battery with a ventilation system. Use of other batteries may effect the electric power management system and allow explosive gases into the vehicle cabin. Refer to your Holden Dealer or authorised repairer.

SPECIFICATIONS – V8 ENGINES

Engine type	GENERATION IV V8
Engine capacity	5967 cc
Engine power and torque	Please refer to holden.com.au
Engine oil specification	SAE 5W-30 ILSAC GF4; API SM
Refill engine oil capacity	7.6 L approximately (including filter)
Coolant specification	50% clean fresh water and 50% Dexcool® anti-freeze coolant, conforming to specification number GM6277M
Coolant capacity	11 L approximately
Automatic transmission fluid	Dexron® VI
Manual transmission fluid	Holden part number 12378329
Differential oil	Castrol SAF Carbon Modified SAE 75W/85 API GL5 GM
Brake and clutch fluid	Dot 4 heavy duty brake fluid conforming to Holden specification number HN 2456
Power steering fluid	Dexron® VI
Fuel tank capacity	73 L
Battery	Maintenance free 12 V, with ventilation system. LN2 460 cold cranking amps (CCA), 85 minutes reserve capacity. LN3* 600 cold cranking amps (CCA), 120 minutes reserve capacity.

WARNING

Use only a manufacturer recommended battery with a ventilation system. Use of other batteries may effect the electric power management system and allow explosive gases into the vehicle cabin. Refer to your Holden Dealer or authorised repairer.

GENERAL SPECIFICATIONS

DIMENSIONS (MM)

	SEDAN						
	Omega	SV6	SS	SS V-series	Berlina	Calais	Calais V-series
Length	4894	4895	4895	4896	4894	4901	4901
Width - excl. mirrors	1899	1899	1899	1899	1899	1899	1899
Width - incl. mirrors	2100	2100	2100	2100	2100	2100	2100
Height	1476	1465	1465	1465	1476	1476	1476
Wheel base	2915	2915	2915	2915	2915	2915	2915
Overhang - front	846	847	847	847	846	853	853
Overhang - rear	1133	1133	1133	1134	1133	1133	1133
Front track	1602	1592	1592	1592	1602	1602	1592
Rear track	1618	1608	1608	1608	1618	1618	1608

The above figures are based on the design dimensions.

AIR CONDITIONING SPECIFICATIONS

Refrigerant type	R-134A
Refrigerant charge	580 g +/- 20 g
Compressor oil type	Polyalkylene glycol (Holden part no.90510419)
Compressor oil refill capacity	120 ml +/- 10 ml

WARNING

The air conditioning system should be serviced by qualified personnel only. Improper service methods may cause personal injury.

GENERAL SPECIFICATIONS cont.

DIMENSIONS (MM)

	SPORTWAGON					
	Omega	SV6 SS	SS-V	Berlina	Calais	Calais V-series
Length	4897	4895	4895	4897	4904	4904
Width - excl. mirrors	1899	1899	1899	1899	1899	1899
Width - incl. mirrors	2100	2100	2100	2100	2100	2100
Height	1476	1476	1476	1476	1476	1476
Wheel base	2915	2915	2915	2915	2915	2915
Overhang - front	846	847	847	846	853	853
Overhang - rear	1136	1134	1134	1136	1136	1136
Front track	1602	1592	1592	1602	1602	1592
Rear track	1618	1608	1608	1618	1618	1608

The above figures are based on the design dimensions.

IDENTIFICATION LABELS

Ⓐ LPG COMPLIANCE PLATE*

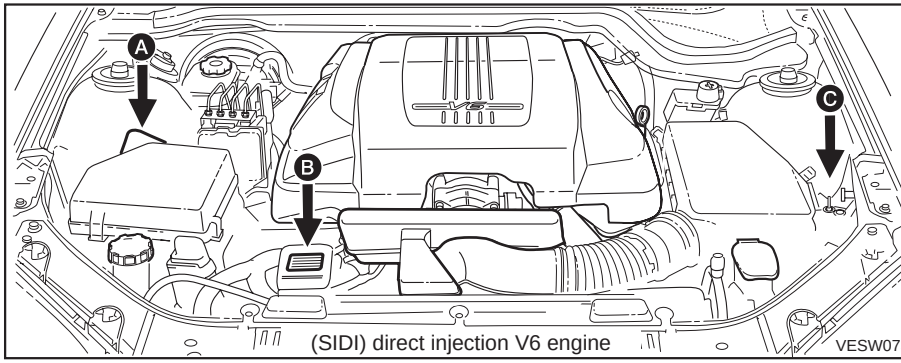
This plate shows the installation date, the plate number, permit number, certificate of compliance number, cylinder (LPG tank) number, Vehicle Identification Number (VIN) and engine number.

Ⓑ COOLING SYSTEM/AIR CONDITIONING LABEL

This label shows the warnings for the air conditioning and cooling system as well as information on the air conditioning refrigerant and compressor oil.

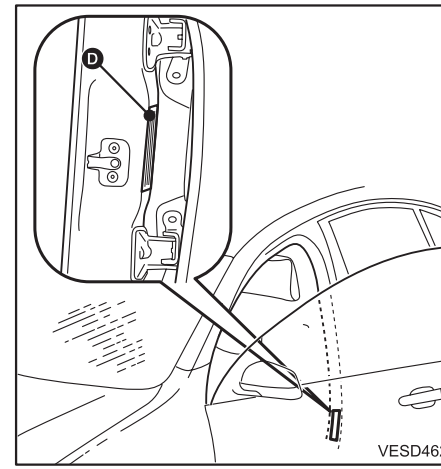
Ⓒ BODY AND OPTION PLATE

This plate shows model identification, Vehicle Identification Number (VIN), paint and trim colour combination, air conditioning, paint number, engine, transmission, axle ratio options, suspension options (where applicable) and build date. The build date is defined as the date by calendar month and year in which the body shell and powertrain sub-assemblies are co-joined and the vehicle is driven or moved from the production line.

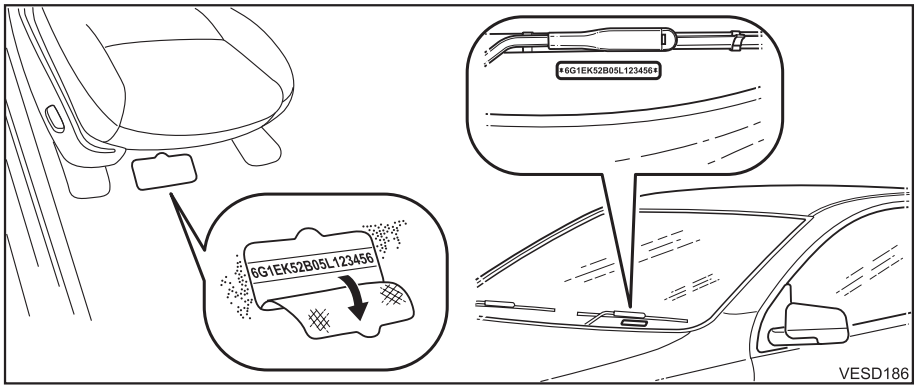


Ⓓ COMPLIANCE LABEL

Shown on the label are the vehicle make, model series, date of manufacture, Vehicle Identification Number (VIN), approved seating capacity and approval number.



IDENTIFICATION LABELS cont.



ISOVIN PLATES

Each vehicle has its own, individual International Standards Organisation Vehicle Identification Number (ISOVIN), which is shown both behind the windscreen on the left side and under the right-hand front seat, under a carpet flap.

6	G	1	E	K	5	H	7	0	A	L	1	2	3	4	5	6

Sequential production number

Plant build code: L = Elizabeth

Model year code: 9 = 2009, A = 2010, etc

Security check code

Engine code: F = 3.0 L Alloytec V6 LF1
7 = 3.6 L Alloytec V6 LY7
V = 3.6 L Alloytec V6 LLT
H = 6.0 L GEN IV V8 L98
Y = 6.0 L GEN IV V8 L76

Restraint code:
A = active manual belts
B = active manual belts, airbag driver only
C = active manual belts, airbag-driver & passenger-front
D = active manual belts, airbag-driver & passenger-front & front seat side
E = active manual belts, airbag-driver & passenger-front, front seat side, roof side
F = active manual belts, airbag-driver & passenger-front & roof side
G = active manual belts, airbag-driver & passenger-front & rear seat side, roof side
H = active manual belts, airbag-driver & passenger-front, front seat side, roof side & knee

Body style code: 5 = Sedan, 8 = Sportwagon

Luxury level: K = Omega/SV6/SS, P = SS-V, L = Berlina, X = Calais/Calais-V

Model series: E = VE

World manufacturer identifier: 6 = Asia Pacific, G = Australia, 1 = GM Holden

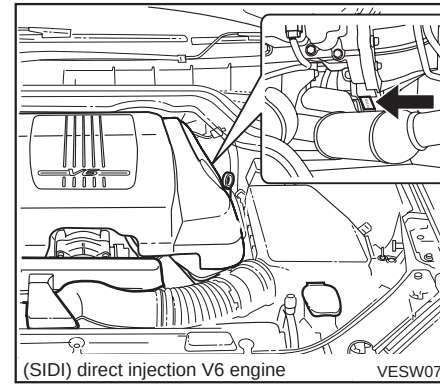
IDENTIFICATION LABELS cont.

ENGINE NUMBER LOCATION

V6 engine

The engine number is located at the rear of the engine on the passenger's side.

Note The engine number must be viewed from under the vehicle.

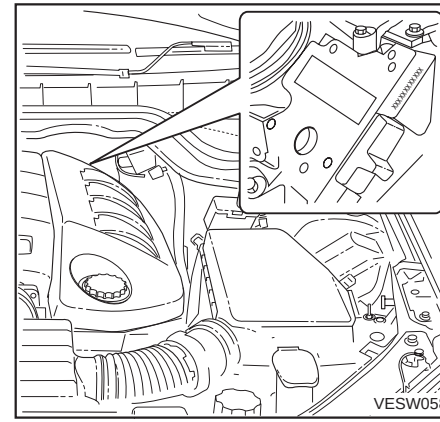


(SIDI) direct injection V6 engine VESW074

V8 engine

The engine number is located at the rear of the engine on the passenger's side.

Note The engine number can be viewed from the top, using a mirror, after the engine cover has been removed,



VESW058

CHAPTER 9

Tow and load

Page
Loading the vehicle.....9-2
Towing 9-5
Loading equipment.....9-10

*The asterisk signifies equipment options not in all vehicles, model variants, engine options, optional equipment and Genuine Holden Accessories (and Parts).

LOADING THE VEHICLE

MAXIMUM VEHICLE PAYLOADS

Overloading is a safety hazard and could also shorten the life of the vehicle. The typical recommended carrying capacity of the vehicle is as shown in the table below.

Do not exceed the maximum axle loads shown below in the diagram, including the weight of any options or accessories fitted to the vehicle.

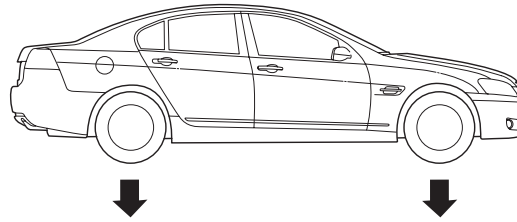
Remember to take the roof rack load into account when determining the rear axle load.

If unsure, the vehicle should be weighed at a weighbridge.

Vehicle	Occupants (at an average of 68 kg each)	Luggage (kg)	Total load (kg)
Sedan	5	68	408

Sportwagon			
Omega	5	140	480
Omega International	5	120	460
Berlina	5	80	420
SV6, SS, SS-V, Calais, Calais-V	5	68	408

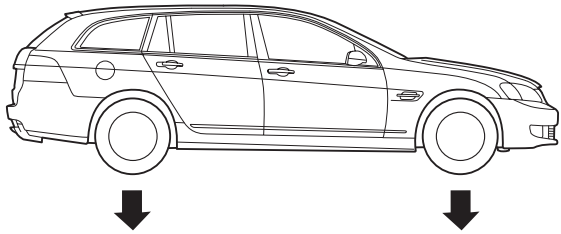
MAXIMUM FRONT AND REAR AXLE LOADS SEDAN



	Rear axle load (kg)		Front axle load (kg)	
Engine type	**V6**	**V8**	**V6**	**V8**
Without LPG	1300	1300	1080	1100
With LPG	1340	-	1080	-
Berlina with LPG	1300	-	1100	-
SS, SSV manual transmission	-	1300	-	1080

LOADING THE VEHICLE cont.

MAXIMUM FRONT AND REAR AXLE LOADS SPORTWAGON



	Rear axle load (kg)		Front axle load (kg)	
Engine type	**V6**	**V8**	**V6**	**V8**
Omega	1425	-	1100	-
Omega International	1400	-	1100	-
Berlina	1350	-	1100	-
SV6	1350	-	1100	-
SS	-	1350	-	1100
SS-V	-	1425	-	1100
Calais	1350	-	1100	-
Calais-V	1400	1400	1100	1100

LOADING THE VEHICLE cont.

NOTES ON LOADING THE VEHICLE

- Place heavy objects in the boot (Sedan) as far forward as possible against the rear seat backrests. Ensure that all cargo is lower than the rear seat backrests (Sportwagon). When stacking objects, place the heavier objects at the bottom. Unsecured objects in the boot (Sedan) or cargo area (Sportwagon) could be thrown forward with great force during heavy braking or in an accident.
- Heavy objects can slip when the vehicle is braking heavily or driven around a bend, and the handling of the vehicle may change.
- Do not place objects in front of the rear window or on the dashboard above the instrument panel. They are reflected in the glass, obstruct the driver's view and may be thrown through the vehicle in the event of heavy braking.
- Driving with a roof load increases the sensitivity of the vehicle to cross winds and affects vehicle handling owing to the higher centre of gravity of the vehicle.
- Do not place objects in the area where the airbags inflate. Objects can cause injury if the airbags are deployed.

ROOF RACKS*

Distribute the load evenly and secure tightly with straps so that it cannot slip. Roof rack loads alter the handling of a vehicle, due to a change in the centre of gravity. When carrying loads on the roof rack, avoid hard braking, abrupt swerving or sharp steering.

WARNING

The load, including the weight of the roof rack, must not exceed 75 kg. Distribute the load evenly.

Note Remember the weight of the roof rack and its load must be included when calculating the total load.

CARRYING PORTABLE GAS CYLINDERS IN VEHICLES

WARNING

Gas cylinders can leak, creating a risk of fire or explosion. As a precaution, ensure adequate ventilation when carrying gas cylinders. They must be restrained from rolling around, and where possible, placed in the load area of the vehicle. It is recommended that if gas cylinders are frequently transported, that a purpose-built carrying compartment be used. Transportation of gas cylinders is regulated by legislation in some States.

TOWING

TRAILERS

The word 'trailer' is used throughout this section and is intended to include all types of towed vehicles, such as a caravan, boat trailer or any other special purpose trailer.

TOWING

The vehicle is designed primarily as a passenger vehicle, so handling, durability and economy may be affected by towing a trailer.

Refer to the *Towing equipment* table further on in this chapter to see which equipment is specified as mandatory and which equipment is recommended for the weight you are towing. Your Holden Dealer will help supply and install towing equipment to suit your requirements.

OVERLOADING

Never exceed the loads given for the towing equipment fitted to the vehicle. For your safety and the vehicle's durability, all mandatory equipment must be fitted. Otherwise you may void the New Vehicle Warranty, to the extent that Holden considers the overloading or missing equipment to have affected the specifications or quality of the vehicle.

MAXIMUM TOWING CAPACITIES (KG) – BRAKED TRAILER

Engine	**3.0L V6**	**3.6L V6**		**V8**	
Transmission	**Automatic**	**Manual**	**Automatic**	**Manual**	**Automatic**
Sedan	1600	1600	2100	1600	2100
Sedan with LPG	-	-	2100	-	-
Sportwagon	1600	1600	2100	1600	2100
Note The maximum unbraked towing capacity for all vehicles is 750 kg.					

WARNING

Holden towing equipment is recommended where it is available. Where it is not available, no recommendation is made as to the make of equipment which should be used. Holden will not accept liability for defects occurring in towing equipment not marketed by Holden or for defects in the vehicle arising from the use of such equipment or for loss or injury caused by use of such equipment. The use of such equipment may void your New Vehicle Warranty, to the extent that Holden considers the non-recommended equipment affects the specifications or quality of your Holden vehicle. It is inadvisable to mix and match different brands of towing equipment, as equipment is usually designed as an integrated package.

MANUAL TRANSMISSION*

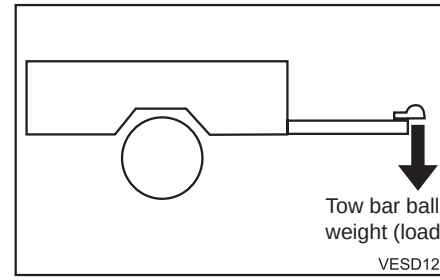
When towing with a manual transmission, do not exceed 100 km/h. Local laws may require a lower maximum speed.

AUTOMATIC TRANSMISSION*

For the recommended automatic shift modes to use when towing, refer to *Driving* in chapter 4.

TOWING cont.

Recommended procedure for attaching a trailer

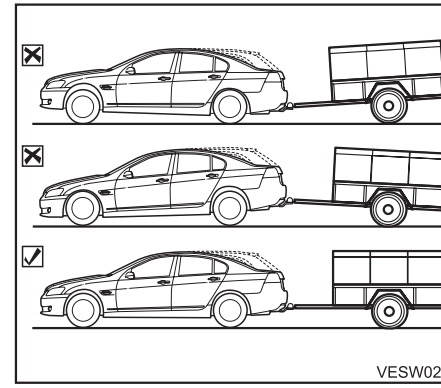


If a trailer is hitched to the vehicle, it places a weight on the tow bar. This weight is called the 'tow bar ball weight' or 'tow ball load'.

For good trailer stability it is recommended that the tow bar ball weight should be 10% of the loaded trailer weight. This can be adjusted by correctly packing the contents of the trailer. For example, by moving items forwards or backwards within the trailer so as to change the balance of the trailer.

If the tow bar ball weight is too light or too heavy, the steering and handling of the vehicle may be affected.

All towing (before you begin)



Axle loads must not be exceeded when the tow bar ball weight is included. Refer previously in this chapter for maximum axle loads. If maximum axle loads are exceeded, sufficient weight should be removed from the rear of the vehicle and transferred onto the trailer.

Ensure the weight of the packed trailer is not greater than the towing capacity of the Holden approved tow bar package fitted to the vehicle.

Towing with Electronic Stability Program

When towing with a vehicle fitted with ESP®, you may hear the noise of the ESP® modulator working. The ESP® is reacting to the vehicle movement caused by the trailer, which mainly occurs during cornering. This is considered normal when towing heavier trailers.

TOWING cont.

TOWING EQUIPMENT

Tow load	Mandatory equipment	Recommended equipment
Up to 1200 kg	Holden 1,200 kg rated tow bar.	A load distribution hitch is recommended for loaded trailers weighing more than 750 kg.
	Holden trailer wiring harness.	
	Electric or hydraulic brakes on the trailer if the loaded trailer weighs more than 750 kg.	
Between 1201 kg and 1600 kg	Holden 2,100 kg rated tow bar.	Load distribution hitch.
	Holden trailer wiring harness.	Superlift shock absorbers (Sedan).
	Electric or hydraulic brakes on the trailer.	Adjust pressure per note 1 on the following page up to a maximum pressure of 650 kPa.
Between 1601 kg and 2100 kg	Holden 2,100 kg rated tow bar.	Superlift shock absorbers (Sedan).
	Holden trailer wiring harness.	Adjust pressure per note 1 on the following page up to a maximum pressure of 650 kPa.
	Electric or hydraulic brakes on the trailer.	
	Load distribution hitch.	

TOWING cont.

TOWING AND LOADING EQUIPMENT

Load distribution hitch*

A load distribution hitch transfers load to the vehicle's front wheels aiding brake performance. This also enables more load to be carried in the vehicle without exceeding the rear axle load limit.

Superlift shock absorbers (Sedan)*

The use of superlift shock absorbers does not increase the carrying capacity of the vehicle. Do not exceed maximum loads for the vehicle, as the overloading of axle parts may shorten the life of the vehicle.

However, superlift shock absorbers do allow adjustment of the vehicle's height, so that the vehicle has improved handling and better ground clearance when the vehicle is heavily loaded.

Note

1. Superlift shock absorbers help to raise the rear of the vehicle and improve ground clearance. However, as superlift pressure is increased, the weight distribution changes, i.e. the proportion of load on the rear axle increases. This means that very high superlift pressures combined with a fully laden vehicle may exceed the rear axle load limit. For this reason do not exceed maximum pressure of 650 kPa.
2. Adjust superlift inflation pressure so that the bottom edges of the vehicle doors are horizontal. Do not exceed maximum pressure of 650 kPa.
3. Superlift air pressure must never be less than 100 kPa or the airbags will be torn, even when no trailer is attached to the vehicle.

WARNING

- At no time may the total front or rear axle load exceed the maximums specified. Refer to *Loading the vehicle* previously in this chapter.
- Superlift shock absorber (Sedan) inflation pressure should never operate below the minimum or above the maximum values shown on the tag attached to the inflation valve.

TOWING cont.

TOWING PRECAUTIONS

- When heavily loading the vehicle or when towing, the tyres should be inflated to the maximum recommended pressure. Refer to *Tyres* in chapter 7 for tyre placard location and information about tyre pressures.
- Ensure that a load distribution hitch is correctly distributing the tow ball load and that superlift shock absorbers (Sedan)* are adjusted correctly. Refer to *Towing and loading equipment* previously in this chapter.
- Tighten the tow ball retaining nut to 175 Nm (Newton metres) and check the torque frequently.
- Vehicles handle differently when towing. It is a good idea to make a couple of short distance trips with the trailer before setting off on a longer journey.
- Have the vehicle correctly maintained and serviced.
- Have the trailer maintained and serviced, with particular attention given to the condition of the brakes, tyres, suspension, wheel bearings, towing coupling and lighting.
- Use an extended-arm mirror on both sides of the vehicle if necessary.
- Headlamps may need re-aiming after the loaded trailer has been hitched, particularly if a load distribution hitch is not used.
- Use a lower gear, and the brakes, when descending steep hills.
- Automatic transmission*: At highway speeds it is recommended that cruise control be used. Cruise control prevents the transmission from unnecessarily changing gears (particularly on grades). Refer to *Automatic transmission* in chapter 4 for further recommendations when towing.
- Do not use axle-mounted hitches. They can cause damage to the axle housing, wheel bearings, wheels and tyres.
- Ensure that the tow bar does not obscure the rear licence plate. If necessary, remove the tow bar tongue when it is not required for towing.
- If a tow bar is removed be certain to have any mounting holes in the underbody properly sealed to prevent the possible entry of exhaust fumes, dust and water.
- Park Assist* will require adjustment to allow for the installation or removal of the tow bar tongue. Refer to *Park Assist* in chapter 4 for adjustment details.

  Note The Holden Dealer fitted accessory, Rear Park Assist (RPA), does not require adjustment for tow bar tongue removal.

Trailer brakes

- Trailer brakes are mandatory on trailers weighing 750 kg and over when loaded. The brakes on the trailer must be designed to cope with the braking requirements of that trailer under all towing conditions, without adversely affecting the brakes on the vehicle.
- Consult the appropriate regulatory body in your State or Territory for the legal requirements of trailer brakes.

Running-in when towing

It is recommended that the new vehicle be driven for at least 1,500 km before towing. If the vehicle must tow before this, do not exceed 80 km/h. The same applies if the vehicle is fitted with a new or reconditioned engine, transmission or rear axle.

Vehicle maintenance

More frequent vehicle maintenance is required when using the vehicle to tow. Refer to the Service/warranty booklet in the vehicle's glovebox.

LOADING EQUIPMENT

CONVENIENCE NET*

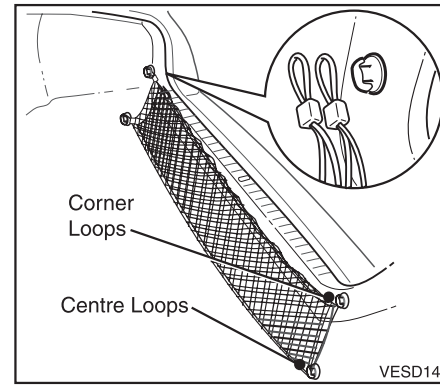
WARNING

- Avoid eye injury. Do not overstretch. Always keep face and body out of recoil path. Do not use when there are visible signs of wear or damage.
- The maximum load for the convenience net is 15 kg single mass. That is, if an object weighs 15 kg, only one object can be held by the convenience net.
- Never use the convenience net when the rear seat is folded down (Sportwagon). These nets are only intended to keep light objects tidy, not for the anchoring of loads.
- Do not use the convenience net external to the vehicle.
- Load size should never be higher than the back seats (Sportwagon). The driver's rear-vision should never be impaired by the load.
- Always make sure the load is secure and will not move during heavy braking or a collision.
- Unsecured loads increase the risk of injury during heavy braking, sudden avoidance manoeuvres or a collision.
- Make sure the back seat is locked in the upright position whenever carrying heavy loads (Sportwagon). This is a basic requirement for protection against load displacement in the event of sudden braking or a collision. The rear seat in the upright position provides greater protection against load displacement.

Sedan

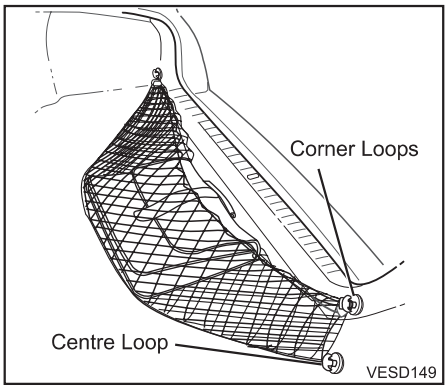
The convenience net is provided inside the boot to secure lightweight items. Four hooks are provided in the vehicle (two on the left side, two on the right) and six loops are provided on the convenience net.

Attach the four corner loops of the net to the top two hooks on the vehicle (two loops on one side, two loops on the other) and attach the net's two centre loops to the bottom hooks on the vehicle.

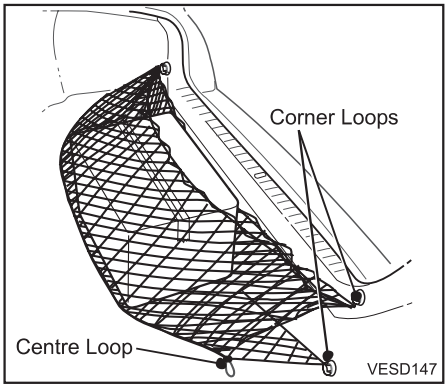


LOADING EQUIPMENT cont.

When the net is required for holding objects such as a briefcase or groceries, the net can be opened and the objects placed inside.



If larger objects are to be secured, the net can be hooked as shown (with a corner loop on each hook and the centre loops unhooked).



LOADING EQUIPMENT cont.

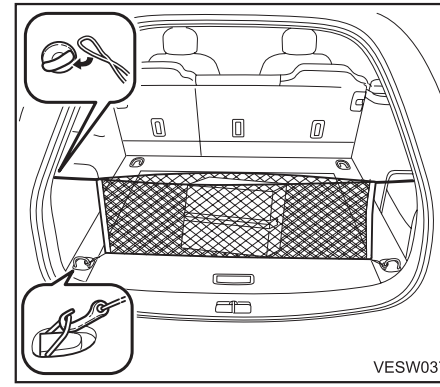
Sportwagon

The convenience net is provided inside the cargo area to secure lightweight items. It can be used in anyone of four positions. Use the four cargo net hooks and the anchor point loops to attach the net.

Note The cargo net is only intended to have items placed inside it, not to hold items against the seat, tailgate or cargo area walls.

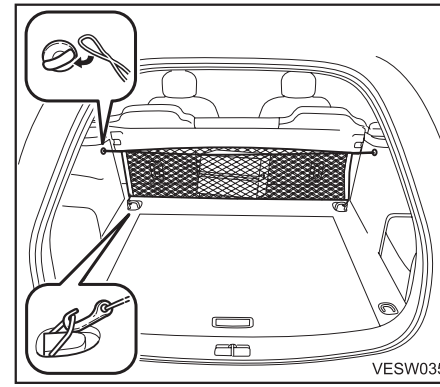
First position, at the rear of the cargo area:

1. Ensure the rear seat backs are in the upright position.
2. Attach the outer loops at the top of the net to the net hooks.
3. Attach the plastic hooks at the bottom of the net to the anchor point loops, as illustrated.



Second position, at the front of the cargo area:

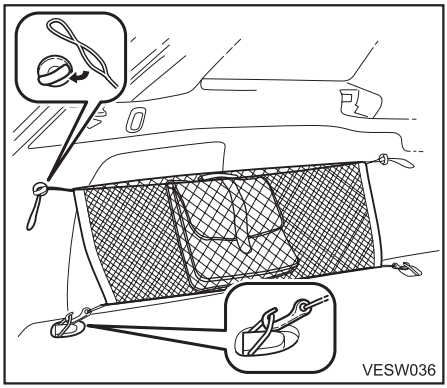
1. Ensure the rear seat backs are in the upright position.
2. Attach the outer loops at the top of the net to the net hooks.
3. Attach the plastic hooks at the bottom of the net to the anchor point loops, as illustrated.



LOADING EQUIPMENT cont.

Third and fourth position, at either side of the cargo area:

1. Ensure the rear seat backs are in the upright position.
2. Attach the inner loops at the top of the net to the net hooks.
3. Attach the plastic hooks at the bottom of the net to the anchor point loops, as illustrated.



LOADING EQUIPMENT cont.

CARGO BARRIER*

The cargo barrier is designed to fit at two positions, behind the rear seats when they are upright, or behind the front seats when the rear seats are folded down.

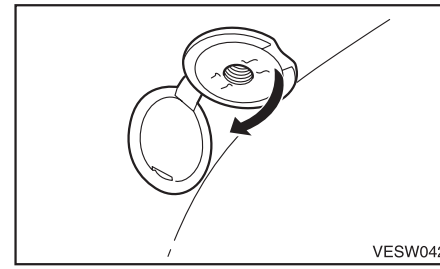
WARNING
It is recommended to correctly anchor the load in the cargo area, even if the cargo barrier is in position.

Rearward position behind upright rear seat

Note

- When fitting the cargo barrier behind the rear seat, the long straps are not required. Ensure they are folded back and tied away securely.
- Prior to placing the cargo barrier into the vehicle, ensure the four attachment straps are rotated to point rearward, toward the ratings label side of the cargo barrier.

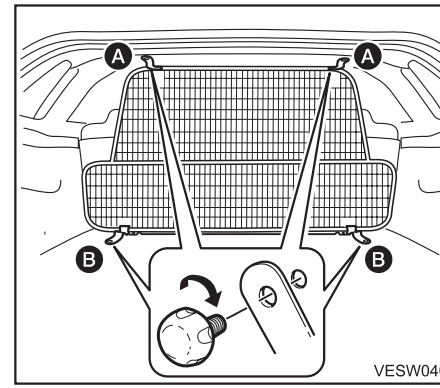
1. Remove the cargo blind*.
2. With the cargo barrier's rating label facing to the rear, tilt the top of the cargo barrier backward and lift into the cargo area.
3. Place the cargo barrier directly behind the rear seat.
4. Tilt the top of the cargo barrier up toward the roof and align the top attachment straps with the roof rearward attaching holes Ⓐ.


VESW042

5. Flip open the upper attaching hole covers.
6. Insert the hand operated bolts into the holes Ⓐ in the roof and turn them clockwise to tighten.

   Note Do not fully tighten until all four hand operated bolts are fitted.
7. Move the short bottom straps so the strap holes align with the mounting nut Ⓑ in the floor.
8. Insert the hand operated bolts into the holes Ⓑ in the floor and turn them clockwise to tighten.

   Note Do not fully tighten until all four bolts are fitted.



VESW040

9. Firmly tighten the four hand operated bolts and check the tension of the four bolts periodically.
10. Refit the cargo blind* as required.

    Note When moving or removing the cargo barrier, reverse this fitting procedure.

LOADING EQUIPMENT cont.

Forward position behind front seats

WARNING

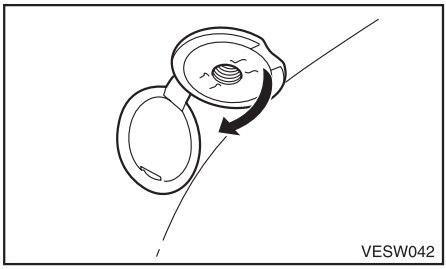
It is recommended to correctly anchor the load in the rear cargo area, even if the cargo barrier is in position.

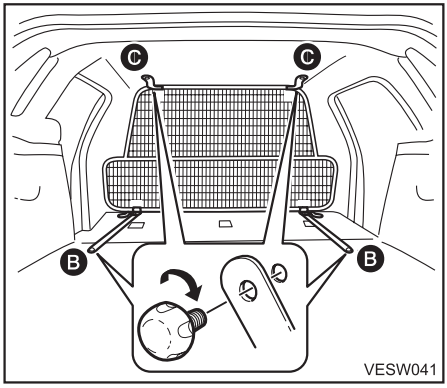
Note

- Prior to placing the cargo barrier into the vehicle, ensure the four attachment straps are rotated to point rearward, toward the ratings label side of the cargo barrier.
- Ensure the long attachment straps are folded back and tied away securely.

1. Remove the cargo blind*.
2. Fold the rear seat down. Refer to *Rear seat* in chapter 3.
3. With the cargo barrier's rating label facing to the rear, tilt the top of the cargo barrier backward and lift into the cargo area.
4. Place the cargo barrier directly behind the front seats.
5. Tilt the top of the cargo barrier up toward the roof and align the top attachment straps with roof forward attaching holes Ⓒ.
6. Flip open the upper attaching hole covers.
7. Insert the hand operated bolts into the holes Ⓒ in the roof and turn them clockwise to tighten.

   Note Do not fully tighten until all four hand operated bolts are fitted.
8. Slide the plastic sleeves on the long straps outward to release the straps.
9. Pivot the long straps rearward so the strap holes align with the mounting nuts Ⓑ in the floor.





10. Insert the hand operated bolts into the holes Ⓒ in the roof and turn them clockwise to tighten.

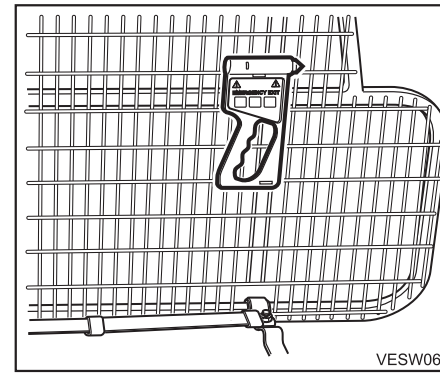
    Note Do not fully tighten until all four bolts are fitted.
11. Firmly tighten the four hand operated bolts and check the tension of the bolts periodically.

    Note When moving or removing the cargo barrier, reverse this fitting procedure.

LOADING EQUIPMENT cont.

Emergency exit hammer

An emergency exit hammer is provided on the cargo barrier for emergency egress from the rear window only. Ensure that the emergency exit hammer is installed in the location shown at all times.



LOADING EQUIPMENT cont.

Carrying heavy loads in the rear cargo area

Holden recommends fitting a genuine Holden cargo barrier when carrying heavy loads in the vehicle. It is designed to reduce cargo impact to passengers in an accident.

WARNING

- It is important that the emergency exit hammer is correctly fitted at all times.
- There is danger of child entrapment when a cargo barrier is fitted. Heatstroke or death may occur if trapped in the vehicle. The emergency exit hammer is only intended to be used for an emergency exit through the rear window of the vehicle and for no other purpose. Do not leave children unattended in this vehicle.
- When possible, place loads directly against the cargo barrier.
- Secure the load with a restraint system.
- If involved in an accident or accidentally damaged, the cargo barrier should be replaced and the anchorages inspected by an Authorised Holden Dealer.
- Passengers should not ride in the cargo area.
- Take care when placing loads behind the cargo barrier so as to prevent damage to child restraint anchorages and seatbelt webbing in an accident.
- In an accident, cargo may cause the cargo barrier to deform toward passengers.
- The rating label must not be removed from the cargo barrier.
- Clean the cargo barrier only with mild soap and water. Do not use solvents or chemicals. Discard the cargo barrier if it becomes rusted. Do not store outside or expose to direct sunlight.
- Do not obstruct seatbelts or child restraints, or their operation.
- Seat, seatbelts or child restraint anchorages must not be used to secure the cargo barrier.
- Long thin items of cargo should be placed lengthways across the vehicle to minimise the risk of penetration.
- Do not attach (drill, rivet, stick and so forth) objects to the front or rear of the cargo barrier.
- The maximum load for a genuine Holden cargo barrier is 60 kg single mass. That is, if an object weighs 60 kg, only one object is permitted behind the cargo barrier.
- Do not use this cargo barrier in any other vehicle for which it is not designed.
- Please refer to the ‘Installation and user instructions’ supplied for details regarding the fitment and usage of the cargo barrier.
- When high tensile fasteners are used, the cargo barrier must be installed using the size and grade fasteners specified by the cargo barrier manufacturer.

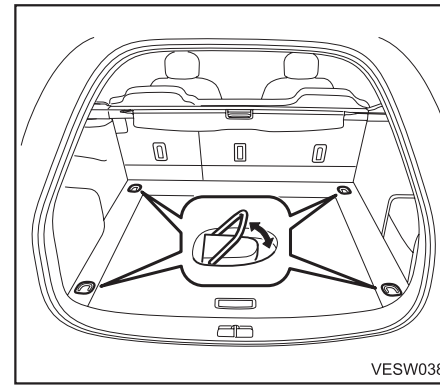
LOADING EQUIPMENT cont.

LOAD ANCHORS (SPORTWAGON)

Four fold down load anchor points are provided in the cargo area. Use these anchor points to secure heavier cargo items.

To use the anchor points:

1. Fold the metal loops to the vertical position.
2. Place the cargo centrally between the four anchor points.
3. Use only approved tie-down straps to secure cargo.
4. Fold the metal loops down flat when not in use.



WARNING

- Always make sure the load is secure and will not move during heavy braking or a collision.
- Unsecured loads increase the risk of injury during heavy braking, sudden avoidance manoeuvres or a collision.
- Use only approved tie-down straps and convenience net to secure your loads. Do not use elasticised straps.
- Never attach more than one tie-down strap to any single tie-down anchor.
- Protect the tie-down straps from sharp edges of the load. Replace them if they begin to wear.
- Make sure the back seat is locked in the upright position whenever carrying heavy loads. This is a basic requirement for protection against load displacement in the event of sudden braking or a collision. The rear seat in the upright position provides greater protection against load displacement.
- The driving characteristics of the vehicle can be affected because the centre of gravity is altered when there is a load in the cargo area. Match your speed and driving style according to how the vehicle is loaded.
- Make sure that the rear axle load of the vehicle is not exceeded as discussed previously in this chapter.
- The maximum load for the tie-down system is 80 kg single mass when used in conjunction with the Holden-approved straps. That is, if an object weighs 80 kg, only one object can be held by the tie-down system.
- Do not use when there are visible signs of wear or damage.
- Place loads as low down and as far forward in the cargo area as possible. That is, against the back seat or cargo barrier*.

LOADING EQUIPMENT cont.

CARGO BLIND* (SPORTWAGON)

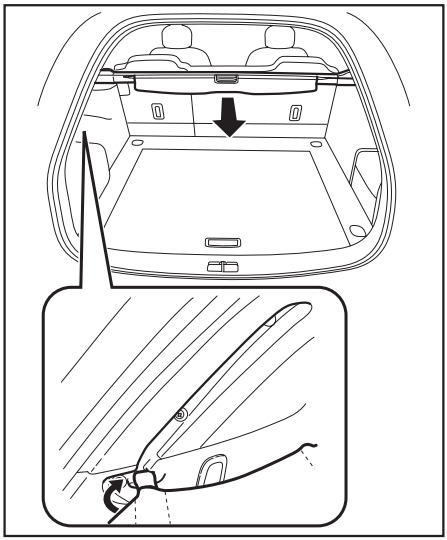
Use the cargo blind to provide protection from the sun and added security for items stored in the cargo area.

WARNING

- Do not place any items on top of the cargo blind.
- Do not allow any items underneath to contact the cargo blind.

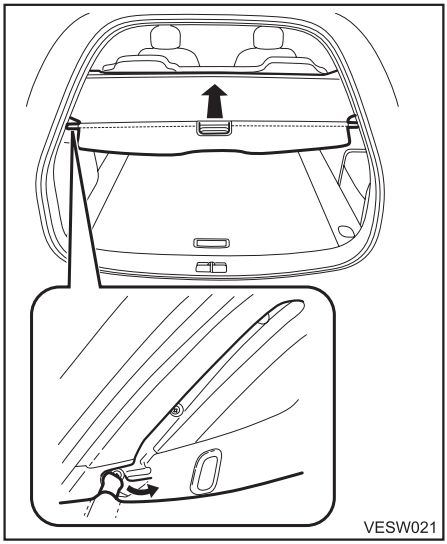
To extend the cargo blind:

1. Use the handle to pull the blind rearward.
2. Engage the blind into the latches on either side.



To retract the blind:

1. Use the handle to pull the blind rearward slightly.
2. Allow the blind to move down slightly out of the latches.
3. Gently let the blind roll up while holding the handle.

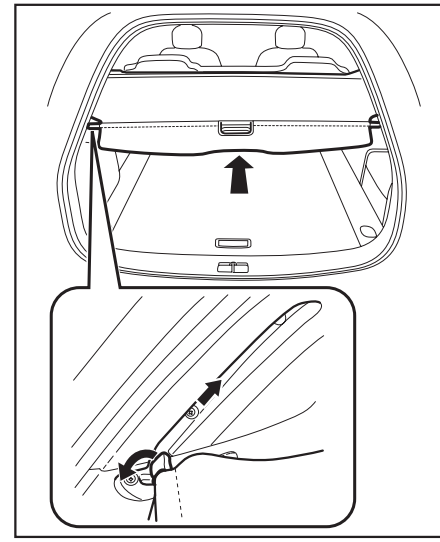


LOADING EQUIPMENT cont.

To allow easy access to items stored in the cargo area while the blind is extended, the rear of the blind can be lifted up.

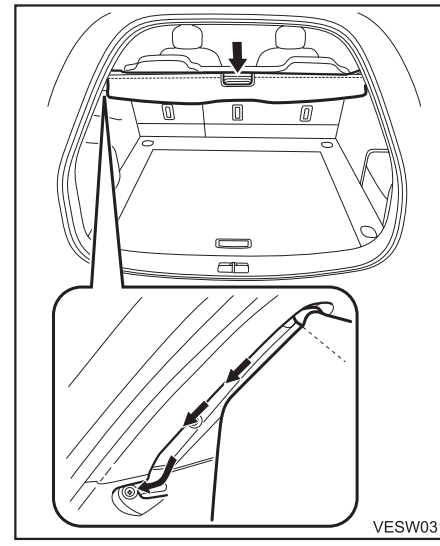
To lift the rear of the blind up:

1. Use the handle to twist the rear of the blind downwards until the blind disengages from the latches.
2. Release the handle and the blind will automatically lift up.



To pull the rear of the blind down:

1. Use the handle to pull the blind downward.
2. Ensure the blind engages into the latch by twisting the handle upwards, after pulling the blind down and into the latch.

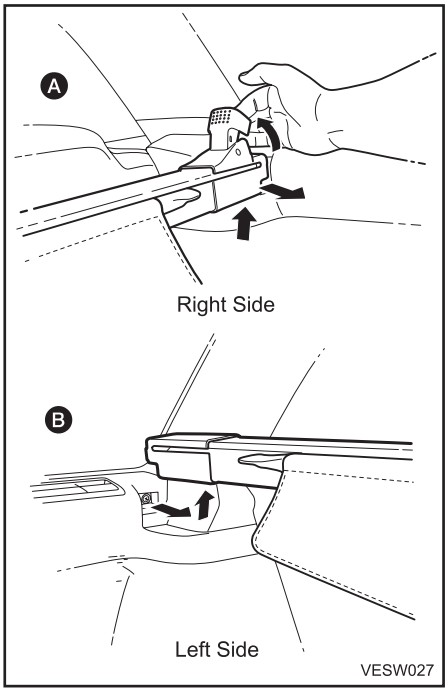


LOADING EQUIPMENT cont.

The cargo blind can be removed from the vehicle.

1. Starting at the right side Ⓐ, lift the lock lever upward.
2. While holding the lever up, lift the right side of the blind up and out of its recess.
3. Remove the left side Ⓑ, by moving the blind slightly to the right side to lift upward.
4. Re-fit the blind in the reverse order.

   Note Ensure the blind is correctly locked in place.

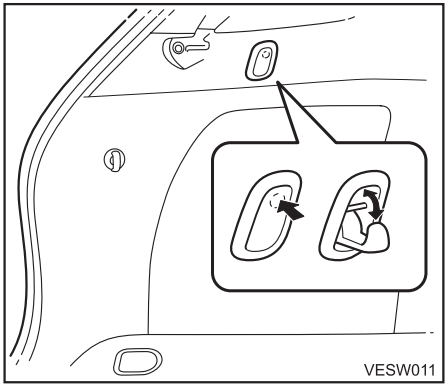


SHOPPING BAG HOOKS (SPORTWAGON)

Shopping bag hooks are provided on either side of the cargo area.

To fold the hook out, push in at the top and release it.

To fold the hook in, move it back to its original position. Push in at the top until it clicks.



NOTES

CHAPTER 10

Cleaning

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*The asterisk signifies equipment options not in all vehicles, model variants, engine options, optional equipment and Genuine Holden Accessories (and Parts).

INTERIOR CLEANING

WARNING

Many cleaning products are toxic, flammable or may damage the interior. When cleaning the interior, avoid volatile cleaners such as acetone, lacquer thinners, enamel reducers, nail polish removers, or cleaners such as laundry soaps, bleaches or reducing agents. Never use carbon tetrachloride, petrol or naphtha for any cleaning purpose. Ensure that the vehicle is well ventilated while using any cleaners and always follow the cleaning product manufacturer's recommendations. Water based cleaners, rather than solvent based cleaners, are recommended.

Steam cleaning of seats is not recommended.

UPHOLSTERY

Remove dust and dirt that has accumulated on upholstery every few weeks, more often with constant driving. This can be done readily with a vacuum cleaner. Before attempting to remove spots and stains, it is necessary to determine:

- the type of fabric,
- the nature and age of the stain,
- the effect of the stain removal agent on the upholstery.

Remove stains as soon as possible. If a stain remains for any length of time it may oxidise or set, making removal very difficult, if not impossible.

VINYL AND HARD TRIM

Wipe over the surface with a dry cloth during the regular cleaning of the vehicle.

WARNING

- Only use a dry cloth to clean around the audio system and electrical switches.
- Care should be exercised when using interior protectant on low gloss surfaces.

Should dirt accumulate and become embedded in the material pattern:

1. Use lukewarm water and soap to work up thick suds on a piece of cheesecloth and apply to the surface.
2. Repeat using only a damp cloth and no soap.
3. Wipe dry with a soft cloth. The above cleaning instructions also apply to the rubber floor mats.

CLOTH

To clean seats upholstered with cloth, observe the following instructions:

- Remove loose dirt and dust with a vacuum cleaner or soft brush.
- DO NOT use a whisk broom or a coarse hair brush.
- For normal soiling, sponge lightly with warm water containing a mild detergent. Rub the fabric lightly and, if necessary, sponge again to remove any stubborn stains. Soak up excess fluid with a dry cloth. A good quality velour fabric and vinyl cleaner may be used, but should be used sparingly.

INTERIOR CLEANING cont.

CARPET

Thoroughly brush or vacuum the carpet. In many instances the carpet may require no further cleaning. If the carpet is extremely soiled, thoroughly vacuum it to remove loose dirt then, using a good quality velour fabric and vinyl cleaner, clean a small area at a time. After each area is cleaned, remove as much of the cleaner as possible with a vacuum cleaner.

Secured carpet mats* Small peg shaped retainers are provided to hold carpet mats in place. To remove the mats, pull up in the area close to the round plastic retainer in the corner of the mat. To replace the mats, position the round plastic retainer over the peg, then push down until it clicks into place.

LEATHER*

To remove surface soil and dirt from leather, clean regularly using a leather revitaliser. Apply using a lint free cloth and rub it onto the leather, do not saturate the leather with the cleaner and do not pour it directly onto the leather. Allow the leather to dry naturally. A mild detergent may be used as an alternative to a leather revitaliser.

For deeply embedded soil and dirt, use a leather cleaner. This should be applied using the same process as leather revitaliser. After using a leather cleaner/revitaliser, apply a leather protector. A leather protector is designed to repel dirt and provides water resistance.

Note

- Clean and protect leather at least twice a year.
- Do not use synthetic cloths or brushes for cleaning the leather as this may damage the leather.
- Do not use solvents as they may damage and/or discolour the leather.
- The leather may shrink and harden if exposed to direct sunlight for extended periods. If possible park in the shade or cover the leather.
- Do not leave items on the leather that may melt and stick to leather, for example, plastic bags.

SEATBELTS

Clean seatbelts only with a mild, non-abrasive soap and lukewarm water. After washing, be sure to thoroughly sponge the washing solution out of the belts.

WARNING

Do not bleach or dye seatbelts as this may severely weaken them.

INTERIOR GLASS

Clean interior glass of the vehicle using a good quality glass cleaner, glass cleaner, and a clean soft cloth. Take care when cleaning inside the rear window so as not to damage the rear window demister or diversity antenna*.

Never use abrasive cleaners on any vehicle glass, as they can cause scratches.

EXTERIOR CLEANING

CARING FOR PAINT

WARNING

Do not spill coolant on the vehicle's exterior surfaces as it can damage the paintwork. If you do, wash it off immediately.

To help preserve that shiny new vehicle finish, pay special attention to correctly treating those conditions that can damage the paint.

- Road bloom:

  If, over a long period of time, oils, dirt, exhaust and other pollutants are allowed to build up, they may combine to affect the paint finish.
- Etching:

  Tree sap, bird droppings, egg white, salt water and other natural deposits can, if allowed to stay on the paint, leave an etching or scarring.
- Pitting:

  Tar spots and some industrial fallout can react chemically and may cause pitting to the surface of the paint.

Note For certain body colours, some variation in gloss and colour may exist in the engine bay or boot (Sedan) and on the underside of the vehicle.

PAINT INSPECTION

Inspect the vehicle regularly for scratch marks, cracks or damaged areas, all of which could develop rust. Repair any deep scratches, cracks or breakdown in the finish without delay. Take care to ensure that any rusting is counteracted immediately, otherwise rust 'creep' will extend beyond the damaged area, particularly in tropical or coastal areas, where the moist, or salt-laden air accelerates rusting. The paint finish of the vehicle gives a very high degree of protection against the weather, but wear and deterioration occur when the vehicle is exposed to elements for prolonged periods. The vehicle therefore should be garaged whenever possible.

To prevent damage of the paint surface, remove foreign matter as soon as possible.

Note Due to the acidity, remove foreign matter such as bird droppings within 24 hours, or sooner if driving in warm conditions.

EXTERIOR CLEANING cont.

WASHING THE VEHICLE

The easiest way to keep the paint looking as new is to keep it clean. A wash once a week will keep the vehicle in good condition. However, it must be washed correctly.

Note

- Never use an automatic wash that requires anything touching the paint (other than water).
- Great care should be taken using automatic or manual high pressure washing devices. Too high a pressure or too close in proximity to the paint or both can damage the paint finish.
- Wash the vehicle once a week to remove build up of any grime on the paint.
- Never wash the vehicle in direct sunlight; find a shady spot to wash the vehicle.

1. Hose the vehicle down from top to bottom with plenty of cold water (in accordance with current water restrictions, if any). This removes any grit or other loose particles and substances. Do not use a sponge or cloth at this point.
2. Fill a bucket with lukewarm water and add no more than two capfuls of gentle detergent. Do not use hot water, strong soap or chemical detergents.
3. To remove bird droppings, soak with a wet sponge for several minutes before washing off. If still persistent, use a solution of 1 litre of water and 110 grams of dissolved baking soda (Bicarbonate of Soda). Rinse the area with clean water.
4. Starting with the roof, use a clean sponge to clean a small section at a time. Do not allow liquid to dry before rinsing off that section with clean water. When all sections are completed, rinse the whole vehicle again with clean water.
5. Dry the vehicle thoroughly with a good quality chamois.

WARNING

Take care when moving the vehicle after washing, in case water has affected the brakes. Applying the brakes lightly will indicate whether they have been affected. To dry them quickly, lightly apply the brakes while maintaining a slow forward speed with a clear area ahead, until brake performance returns to normal.

REMOVING STAINS (GREASE, OIL AND TAR SPOTS)

Washing the vehicle regularly means that most of the harmful substances deposited on the paint are removed before they can cause permanent damage. However, some substances are not easy to remove. If you notice stains on the paint, make sure that you remove them at the earliest possible opportunity.

Grease and oil, and even tar if it's fresh, can be removed from the paint with a little kerosene or turpentine. As a precaution against staining, wash and polish the area as soon as possible after the stain has been removed. A rubbing or cutting compound can be used after a normal wash. Do not do this on a regular basis as it removes paint.

WARNING

- Some chemical cleaners, used for removing road oils and tars from painted surfaces, have been found to be detrimental to automotive paint.
- If petrol is spilt on the paint when refilling, flush off immediately with clean water as petrol has a tendency to stain or soften new paint finish during the weathering out period, particularly when the vehicle is exposed to high temperatures.
- Petrol MUST NOT be used to clean any painted or plastic surfaces.

EXTERIOR CLEANING cont.

AIR INTAKES

The intake area between the bonnet and windscreen can collect leaves which impairs air flow into the vehicle. Also, the air intake area below the front bumper can collect leaves and road grime, which impairs engine cooling. Refer to *Exterior checks* in chapter 7. Clear this area of debris whenever the vehicle is washed.

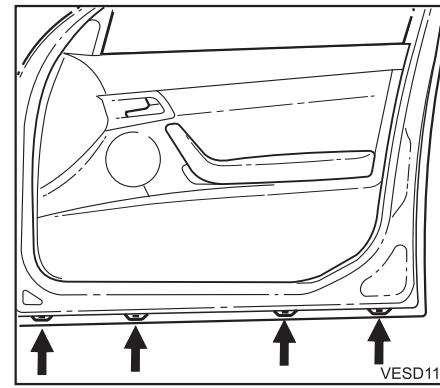
UNDER VEHICLE WASHING

The effects of substances such as salt from road surfaces can cause rust under the vehicle. Hose the underbody with clean water whenever the vehicle is washed. In geographical areas having a heavy concentration of corrosive materials (such as by the sea), it is recommended that the complete underbody be inspected and washed at least once each year, preferably after winter exposure. Pay particular attention to cleaning out the underbody where dirt and other foreign materials may have collected.

DOOR DRAIN HOLES

It is important that the drain holes at the bottom of the door panels are checked to make sure they are free of dirt and other foreign materials which could trap water inside the panels. Clean clogged drain holes with a plastic pin or peg. Care should be taken not to scratch the paint work.

Note The drain holes in the doors are located behind the lower door seal.



POLISHING

Under normal circumstances the paint does not need polishing to retain its shine. A weekly wash is sufficient. However, the use of a good quality polymer glaze, approximately every 3 months will reduce the effects of road bloom by removing natural contaminants which can build up on the paint.

WARNING

Do not attempt to apply a polish without first washing the vehicle to remove loose grit, surface dirt, dust or grease.

TYRES

Sponging with cold water is all that is necessary for normal cleaning. Oil and grease should be removed with soap and water or detergent. For tar or other substances, use a mild abrasive, such as mechanic's hand soap or kitchen cleaning powder, if necessary. Thoroughly wash the tyres with clean water to finish. Do not use petrol to clean tyres.

A new tyre look can be restored using a good quality tyre and bumper shine.

EXTERIOR CLEANING cont.

ALLOY WHEELS*

To preserve the original appearance of alloy wheels, keep them clean and free from build up of road dirt. A good quality wheel cleaner can be used for cleaning alloy wheels. Do not use abrasive cleaners on alloy wheels, as the painted surface may be damaged.

GLASS CLEANING – GENERAL

Take care not to scratch the glass. If it is cleaned at the same time as the rest of the vehicle, there is a possibility that particles of grit will cause fine scratches. Flush off any mud on the glass when washing the body, but leave the final cleaning and polishing until afterwards. Use a good quality glass cleaner and wash each section of glass in turn, making sure that the water, its container and the sponge are quite clean and free from grit. A clean, old linen cloth is better than new material for polishing glass.

WINDSCREEN

It is important that the windscreen be kept clean so that the wiper blades operate as effectively as possible. Old wiper blades can cause windscreen scratching. Regularly inspect and replace them.

Never use abrasive cleaners to clean glass as they can cause scratches, impairing night vision. After the windscreen has been cleaned with a wet sponge, wipe it over with a soft, lint free cloth or chamois.

Refer to your Holden Dealer for windscreen washer additive.

WIPER BLADES

Oil and road scum thrown up on the windscreen causes smearing when the wipers are switched on and is transferred onto the wiper blades. While many methodically clean the windscreen glass, they often forget to clean the wiper blades. Consequently, smearing of the glass reappears immediately after the wiper blades are used. Clean the blades by lifting them off the windscreen and cleaning with a clean cloth and windscreen washer additive.

WARNING

Do not operate the wiper blades by hand as this damages the wiper drive mechanism.

If the wiper blades are used to clean dust and dirt from the windscreen in dry conditions, always use the washer system first to wet the windscreen. Ensure that the windscreen washer reservoir is full.

Should the wiper blades freeze to the windscreen, you must lift them off and free them by hand before switching on the wipers.

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